Equipment work under tension

Low-voltage

Pliers

universal pliers

- made of oil hardened steel, for hard wires
- high-frequency-hardened cutting edges
- chrome-plated head
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
universal pliers	165 mm	230 g	7101165	20,00
universal pliers	180 mm	290 g	7101180	20,67
universal pliers	205 mm	390 g	7101205	21,36
universal pliers	250 mm	570 g	7101250	30,99

universal pliers, coated work-head

- coated work-head
- handels PVC-dip-isolated according to EN 60900

1000 V

description	size	weigth	Article	euro
universal pliers	185 mm	280 g	7131185	36,89
universal pliers	205 mm	350 g	7131205	39,61

universal pliers, isolating, GFK

- extra long cutting edges
- for cutting of flexible conductors
- grabbing zone with depressions
- robust Version out of glass-fibre-strengthened plastic
- according to EN 60900

1000 V

description	size	weigth	Article	euro
universal pliers	200 mm	130 g	7116203	48,32

special-plier for NAKLAY

- special-plier for opening sheath of cables at the Rheydter-Cut
- with special working head for catching the aluminium sheath
- catch-zone with deepenings
- heavy plier with plastic of fiberglass
- EN 60900

1000 V

description	size	weigth	Article	euro
special-plier	205 mm	210 g	7116205	288,52

side cutter

- made of oil hardened steel
- chrome plated head for hard and soft steel
- high-frequency-hardened cutting edges
- handels PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
side cutter	160 mm	270 g	7104160	21,11
side cutter	180 mm	330 g	7104180	21,86

side cutter, coated work-head

- coated work-head
- handels PVC-dip-isolated according to EN 60900

1000 V

description	size	weigth	Article	euro
side cutter	160 mm	230 g	7133160	41,61
side cutter	180 mm	330 g	7133180	46,73

power side cutter

- made of oil hardened steel
- for hard wires
- cutting edges inductive hardened
- chrome-plated head
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
power side cutter	180 mm	320 g	7105180	29,47
power side cutter	250 mm	580 g	7105250	35,72

front cutter

- made of special steel
- for hard and soft wires
- chrome-plated head
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
front cutter	160 mm	250 g	7110160	29,14

side cutter, lead-seal-side-cutter

- made of special steel
- changeable insets for lead seals
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
lead-seal-side-cutter	155 mm	220 g	7114155	50,72

waterpump pliers

- made of chrom-vanadim-steel with terminal protection
- handles PVC-dip-isolated according to EN 60900

1000 V

description	size	weigth	Article	euro
waterpump pliers	240 mm	350 g	7111240	22,94

rounding pliers

- made of oil hardened steel, for hard wires
- short, round jaws
- chrome-plated head
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
rounding pliers	160 mm	180 g	7103160	16,28

flat-nosed pliers

- made of oil hardened steel, for hard wires
- with short, powerful jaws
- chrome-plated head
- toothed gripping surface
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
flat-nosed pliers	160 mm	200 g	7102160	16,28

flat-nosed pliers, coated work head

- coated work head
- handels PVC-dip-isolated according to EN 60900

1000 V

description	size	weigth	Article	euro
flat-nosed pliers	160 mm	190 g	7113160	35,04

flat-nosed pliers Langbeck, coated work head

- coated work head
- handles PVC-dip-isolated according to EN 60900

1000 V

description	size	weigth	Article	euro
Langbeck-flat-nosed pliers	160 mm	130 g	7134160	35,04

flat-nosed pliers, phone pliers isolating, without cut.-edge

- toothed gripping surfaces
- slim front, especially suitable for counter- and MSR-work
- robust version out of glass-fibre-strengthened plastic
- without cutting edges
- EN 60900

1000 V

description	lenght	weigth	Article	euro
flat-nosed pliers	190 mm	160 g	7116201	37,78

flat-nosed pliers, phone pliers isolating, with cut.-edge

- toothed gripping surfaces
- slim front, especially suitable for counter- and MSR-work
- robust version out of glass-fibre-strengthened plastic
- with cutting edges
- EN 60900

1000 V

description	size	weigth	Article	euro
telephone pliers	190 mm	85 g	7116200	51,29

telephone pliers, straight cheeks

- made of oil hardened steel, for hard wires
- high-frequency-hardened cutting edges
- chrome-plated head
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
telephone pliers	170 mm	170 g	7106170	18,71
telephone pliers	205 mm	230 g	7106205	19,33

telephone pliers, bended cheeks

- made of oil hardened steel, for hard wires
- high-frequency-hardened cutting edges
- chrome-plated head
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
telephone pliers	205 mm	210 g	7107205	21,77

telephone pliers straight, coated work head

- coated work head
- handles PVC-dip-isolated according to EN 60900

1000 V

description	size	weigth	Article	euro
telephone pliers	160 mm	180 g	7115160	38,77
telephone pliers	200 mm	230 g	7115200	40,77

telephone pliers bended, coated work head

- coated work head
- handles PVC-dip-isolated according to EN 60900

1000 V

description	size	weigth	Article	euro
telephone pliers	200 mm	220 g	7138200	43,49

duck-billed-pliers, coated work head

- coated work head
- handles PVC-dip-isolated according to EN 60900

1000 V

description	size	weigth	Article	euro
duck-billed-pliers	200 mm	220 g	7137200	66,05

stripping pliers

- made of special steel
- with set screw, down to 10 mm² cross-section
- chrome-plated head
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
stripping pliers	150 mm	180 g	7108150	18,92

stripping pliers, self-adjusting

- made of special steel for wires of 0,5 - 5 mm diameter
- self-adjusting
- with a cutting-hole for seperating of cable and litz up to 5 mm
- EN 60900

1000 V

description	lenght	weigth	Article	euro
stripping pliers	160 mm	220 g	7108160	29,51

stripping pliers, coated work head

- coated work head
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
stripping pliers	160 mm	180 g	7135160	41,38

adjusting pliers

- form A, B, C, D
- coated work head
- PE-handles with anti-sliping-protection

1000 V

description	size	weigth	Article	euro
adjusting pliers form A	130 mm	150 g	7112130 A	26,09
adjusting pliers form B	130 mm	155 g	7112130 B	26,09
adjusting pliers form C	130 mm	165 g	7112130 C	26,09
adjusting pliers form D	130 mm	160 g	7112130 D	27,84

single-hand cable cutter

- made of vanadiumsteel, forged and burnished
- precision screwing rack
- cutting-performence:
  Cu- u. Al-cables single-wiry up to 16 mm², multi-wiry up to 25 mm², fine-wiry up to 50 mm²
- unsuitable for steel-wire and hard-drawed Cu-wires
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	cross-section	size	weigth	Article	euro
singel-hand cable cutter	25 mm²	160 mm	250 g	7109170	28,95

single-hand cable cutter

- made of vanadiumsteel, forged
- cutting-performence:
  soft, multi-wiry up to 25 mm² Cu- u. Al-cables up to 35 mm²
- unsuitable for steel-wire and hard-drawed Cu-wires
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	cross-section	size	weigth	Article	euro
cable cutter	bis 35 mm²	165 mm	240 g	7109171	28,42

single-hand cable cutter

- made of special steel, forged
- low effort by a favourably speed ratio
- cutting-performence:
  Cu- u. Al-cables single- and multi-wiry up to 50 mm²
- unsuitable for steel-wire and hard-drawed Cu-wires
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	cross-section	size	weigth	Article	euro
cable cutter	50 mm²	200 mm	365 g	7109240	53,54

single-hand cable cutter

- made of vanadiumsteel, forged and burnished
- cutting-performence:
  Cu- u. Al-cables single-wiry up to 25 mm², multi-wiry up to 50 mm², fine-wiry up to 70 mm²
- unsuitable for steel-wire and hard-drawed Cu-wires
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	cross-section	size	weigth	Article	euro
cable cutter	bis 50 mm²	215 mm	360 g	7109215	38,23

cable cutter, U.S. model

- made of forged tool steel
- roped conductors up 50 mm²
- only for Cu- u. Al-cables
- handels PVC-dip-isolated according to EN 60900, shock-resistant
- low effort
- for roughly Work and highest use

1000 V

description	cross-section	size	weigth	Article	euro
cable cutter	70 mm²	240 mm	455 g	7109250	55,51

press pliers, up to 1000 V

- mechn. hand-press-pliers for pressing of cable-cross-sections 6- 185 mm²
- handles PVC-dip-isolated according to EN 60900, shock-resistant
- handles with anti-sliping-protection
- head 360° revolving
- press insets, to see in group of articles 8
- delivered without carrying case
- carrying case with free space for press insets, 2 plug-in clasps, carrying handle

1000 V

description	size	weigth	Article	euro
press pliers isolated	SK bis 185 mm²	2,7 kg	7325185	710,35
carrying case	800 x 260 x 100 mm	1,3 kg	7325186	82,05

Cable shears

cable scissors 505 mm, WuP, up to 1000 V

- the cut head is made of forged vanadium-steel
- low effort and clean cut
- adjustable helical link
- cutting-performence:
  150mm² Cu- u. Al-cables
- unsuitable for steel-wire and hard-drawed Cu-wires
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	lenght	weigth	Article	euro
cable scissors	505 mm	1,5 kg	7119505	103,90

cable scissors 600 mm, 1000V

- the cut head is made of forged vanadium-steel
- adjustable cutting edges
- for Cu- and Al-cables
- Al- arms
- for squeezing free cutting of Cu- and Al- cables up to 250/500 mm²
- cable diameters 35/50 mm
- unsuitable for steel-wire and hard-drawed Cu-wires
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	cross-section	lenght	Article	euro
cable scissors 600		600 mm	7119600	167,16
cable scissors 600		800 mm	7119800	229,43

cable scissors with lever-ratio, 600 mm, 1000 V

- low effort and clean cut
- changeable head
- cutting edges made of alloyed special steel
- opening width 26/33/40 mm
- cable diameters up to 150/185/240 mm²
- unsuitable for steel-wire and hard-drawed Cu-wires
- handles PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	lenght	weigth	Article	euro
cable scissors	600 mm	2,7 kg	7121600	130,92
replacement head	600 mm	320 g	7121601	62,74
cable scissors	700 mm	3,3 kg	7121700	153,54
replacement head	700 mm	340 g	7121701	71,45

wire rope- and cable scissors

- cutting edges made of high-quality special steel
- changeable head
- for Cu- und Alu-wires bzw. Alu und Al/St-cable up to 120 mm²
- handles PVC-dip-isolated according to EN 60900

1000 V

description	lenght	weigth	Article	euro
wire rope- and cable scissors	600 mm	1,8 kg	7120600	303,08
replacement head		335 g	7120601	181,50

ratchet cable cutter

- PVC-dip-isolated according to EN 60900
- low effort
- cutting edge goes to starting position by spring release
- cutting-performence:
  length 290 mm: 185 mm² AL/ 150 mm² Cu, single-core
  length 300 mm: 240 mm² AL/ 240 mm² Cu, single-core
- cutting in the cutting wedge is possible
- unsuitable for steal-reinforced wires!

1000 V

description	size	weigth	Article	euro
ratchet cable cutter	290 mm	600 g	7121290	232,30
ratchet cable cutter	300 mm	630 g	7121330	304,29

Hammers

plastic hammer

- completely out of synthetic material
- PVC-dip-isolated, shock-resistant

1000 V

description	diameter	weigth	Article	euro
plastic hammer	50 mm	345 g	7130050	15,90

kinder(recoil-free) hammer

- free of recoils
- beating head changeable
- fully insulated according to EN 60900

1000 V

description	diameter	weigth	Article	euro
kinder(recoil-free) hammer	25 mm	560 g	7122200	53,78
kinder(recoil-free) hammer	35 mm	790 g	7122300	49,09

Cable measurer

cable knife

- straight blade included in the hilt
- hilt made of a viscoplastic and impact-resistant synthetic material
- length 180 mm
- with blade-protection
- EN 60900

1000 V

description	blade length	weigth	Article	euro
cable knife	50 mm	105 g	7124180	9,16

cable knife partly insulated blade

- straight partly isolated steel-blade included in the hilt
- hilt made of a viscoplastic and impact-resistant synthetic material
- length 180 mm
- with blade-protection
- EN 60900

1000 V

description	blade length	weigth	Article	euro
cable knife partly insulated blade	50 mm	115 g	7127180	9,11

cable knife, defining-knife

- steel-blade included in the hilt, half-shaped, insulated blade
- hilt made of a viscoplastic and impact-resistant synthetic material
- length 160 mm
- with blade-protection
- EN 60900

1000 V

description	blade length	weigth	Article	euro
defining-knife	35 mm	75 g	7126160	9,64

cable knife, dismantling/stripping knife

- straight blade included in the hilt
- hook-shaped blade
- hilt made of a viscoplastic and impact-resistant synthetic material
- length 160 mm
- with blade-protection
- EN 60900

1000 V

description	blade length	weigth	Article	euro
dismantling/stripping knife	35 mm	95 g	7125160	9,66

cable knife with hook blade

- straight blade included in the hilt
- hilt made of a viscoplastic and impact-resistant synthetic material
- length 170 mm
- with blade-protection
- EN 60900

1000 V

description	blade length	weigth	Article	euro
cable knife, hook blade	40 mm	100 g	7128170	20,01

cable knife, phase-dismantling knife

- straight, narrow blade included in the hilt
- hilt made of a viscoplastic and impact-resistant synthetic material
- length 170 mm
- with blade-protection
- EN 60900

1000 V

description	blade length	weigth	Article	euro
phase-dismantling knife	50 mm	95 g	7129170	8,45

cable knife, paper-section knife

- very sharp blade included in the hilt
- hilt made of a viscoplastic and impact-resistant synthetic material
- with blade-protection
- EN 60900

1000 V

description	blade length	weigth	Article	euro
paper-section knife	50 mm	90 g	7138050	6,48

cable knife, Guttapercha-knife

- powerful curved blade included in the hilt
- hilt made of a viscoplastic and impact-resistant synthetic material
- with blade-protection
- EN 60900

1000 V

description	blade length	weigth	Article	euro
Guttapercha-knife	50 mm	95 g	7139050	6,30

stripping-knife

- blade with a short curved cutting edge included in the hilt
- hilt made of a viscoplastic and impact-resistant synthetic material
- with blade-protection
- EN 60900

1000 V

description	blade length	weigth	Article	euro
stripping-knife	45 mm	95 g	7140045	9,46

cable knife with changeable blade

- straight partly insulated solid blade
- blade out of stainless steel hardened included in the hilt
- blade insulation and blade-protection out of shock-resistant plastic
- foldable blade-protection
- EN 60900

1000 V

description	size	weigth	Article	euro
cable knife	200 mm	70 g	7141200	13,63
replacement blade, solid	80 mm	20 g	7141201	4,41

universal knife with changeable trapezoid-blade

- straight partly insulated solid blade out of stainless steel hardened, included in the hilt
- blade insulation and blade-protection out of shock-resistant plastic
- foldable blade-protection
- with changeable trapezoid-blade
- EN 60900

1000 V

description	size	weigth	Article	euro
universal knife	200 mm	70 g	7160200	12,29
replacement-trapezoid-blade	60 mm	20 g	7160201	0,88

cable knife with ceramic blade

- EN 60900
- blade is made of ceramics
- isulating cable knife
- blade changeable
- blade protection bolt

1000 V

description	size	weigth	Article	euro
cable knife	200 mm	80 g	7160300	69,70
ceramic blade	70 mm	35 g	7160301	62,50

cable knife with ceramic-hook-blade

- EN 60900
- blade is made of ceramics and formed like a hook
- isulating cable knife
- blade changeable
- blade protection bolt

1000 V

description	size	weigth	Article	euro
cable knife	200 mm	80 g	7160400	74,20
ceramic blade	60 mm	30 g	7160401	65,90

single open end spanner

- chrome-vanadium-steel
- PVC-dip-isolated according to EN 60900, shock-resistant
- muzzle/mouth postion 15°

1000 V

description	size	weigth	Article	euro
single open end spanner	SW 5,5	12 g	7301055	10,30
single open end spanner	SW 6	32 g	7301060	7,83
single open end spanner	SW 7	32 g	7301070	7,83
single open end spanner	SW 8	34 g	7301080	8,09
single open end spanner	SW 9	38 g	7301090	8,18
single open end spanner	SW 10	40 g	7301100	7,74
single open end spanner	SW 11	46 g	7301110	8,54
single open end spanner	SW 12	54 g	7301120	8,99
single open end spanner	SW 13	65 g	7301130	9,08
single open end spanner	SW 14	80 g	7301140	9,98
single open end spanner	SW 15	92 g	7301150	10,78
single open end spanner	SW 16	115 g	7301160	10,80
single open end spanner	SW 17	115 g	7301170	11,10
single open end spanner	SW 18	115 g	7301180	11,10
single open end spanner	SW 19	150 g	7301190	11,19
single open end spanner	SW 20	165 g	7301200	12,35
single open end spanner	SW 21	185 g	7301210	12,26
single open end spanner	SW 22	190 g	7301220	12,76
single open end spanner	SW 24	300 g	7301240	15,35
single open end spanner	SW 27	390 g	7301270	19,53
single open end spanner	SW 30	510 g	7301300	21,16
single open end spanner	SW 32	550 g	7301320	21,25
single open end spanner	SW 34	640 g	7301340	26,33
single open end spanner	SW 36	700 g	7301360	27,24

simple ring wrench, cranked

- made of chrome-vanadium-steel
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
ring wrench	SW 8	60 g	7302008	9,92
ring wrench	SW 9	60 g	7302009	9,78
ring wrench	SW 10	80 g	7302100	10,49
ring wrench	SW 11	86 g	7302110	11,39
ring wrench	SW 12	100 g	7302120	11,39
ring wrench	SW 13	110 g	7302130	12,65
ring wrench	SW 14	160 g	7302140	13,50
ring wrench	SW 15	170 g	7302150	13,91
ring wrench	SW 16	202 g	7302160	14,36
ring wrench	SW 17	260 g	7302170	14,36
ring wrench	SW 18	260 g	7302180	15,31
ring wrench	SW 19	290 g	7302190	15,31
ring wrench	SW 20	290 g	7302200	17,31
ring wrench	SW 21	310 g	7302210	17,33
ring wrench	SW 22	320 g	7302220	17,47
ring wrench	SW 24	490 g	7302240	19,13
ring wrench	SW 27	540 g	7302270	20,73
ring wrench	SW 30	580 g	7302300	24,64
ring wrench	SW 32	590 g	7302320	25,07
ring wrench	SW 34	640 g	7302340	28,83
ring wrench	SW 36	740 g	7302360	46,80

adjustable spanner

- burnished with scale
- PVC-dip-isolated according to EN 60900

1000 V

description	size	weigth	Article	euro
adjustable spanner	0 - 27 mm	345 g	7337200	36,61
adjustable spanner	0 - 30 mm	530 g	7337250	42,06
adjustable spanner	0 - 34 mm	800 g	7337300	58,39

adjustable spanner

- burnished with scale
- PVC-dip-isolated according to EN 60900

1000 V

description	size	weigth	Article	euro
adjustable spanner	0 - 27 mm	260 g	7338200	26,43
adjustable spanner	0 - 30 mm	515 g	7338250	30,83
adjustable spanner	0 - 37 mm	750 g	7338300	41,15

ring wrench, ratchet ring wrench with free-wheel

- burnished with scale
- PVC-dip-isolated according to EN 60900

1000 V

description	lenght	diameter	size	weigth	Article	euro
ratchet ring wrench	170 mm		SW 13	150 g	7302013	17,01
ratchet ring wrench	200 mm		SW 17	190 g	7302017	17,69
ratchet ring wrench	200 mm		SW 19	230 g	7302019	19,43

holder für screws

- EN 60900
- chrome-vanadium-steel
- PVC-dip-isolated, shock-resistant
- 90° curved working part

1000 V

description	size	weigth	Article	euro
holder	SW 10	100 g	7312100	30,15
holder	SW 12	110 g	7312120	27,04
holder	SW 13	110 g	7312130	32,11
holder	SW 14	130 g	7312140	32,39
holder	SW 15	160 g	7312150	28,21
holder	SW 16	220 g	7312160	29,79
holder	SW 17	240 g	7312170	36,54
holder	SW 18	280 g	7312180	30,37
holder	SW 19	290 g	7312190	38,33
holder	SW 20	290 g	7312200	32,54
holder	SW 22	310 g	7312220	41,98
holder	SW 24	360 g	7312240	44,47

stripping tool, isolated

- for removing of all insulation layers from cable with ø from 25 mm
- cutting deep adjustable from 0 to 5 mm
- changeable double-blade (turning blade)
- suitable for longitudinal- and circle-cuttings
- delivery in a nylon-case

1000 V

description	diameter	weigth	Article	euro
dismantling tool	ab 25 mm	350 g	7060170	209,01
replacement-blade		40 g	8135171	31,24
blade shoe		40 g	8135172	3,12

striping pliers PG 3 up to 1000 V

- for cutting and removing of cable sheaths of low voltage cabel
- low effort for longitudinal- and circular-cuttings
- little space requirement through 4 cutting edges
- turning ca. 30 % of the cable extent
- EN 60900

1000 V

description	cross-section	size	weigth	Article	euro
stripping pliers	26 - 52 mm		400 g	7060003	627,90
replacement blade for circular cut				7060004	67,73
replacement balde for longitudinal cut				7060005	67,73

Screwdriver

flat blade screwdriver

- EN 60900
- blade chrome-vanadium-molydaen-steel, continuously hardened, brunished
- on the blade direct squirted protection insulation
- with power-form-hilt

1000 V

description	size	weigth	Article	euro
flat blade screwdriver	2,5 x 75 mm	34 g	7201025	3,83
flat blade screwdriver	3,0 x 100 mm	38 g	7201030	3,83
flat blade screwdriver	3,5 x 100 mm	41 g	7201035	4,00
flat blade screwdriver	4,0 x 100 mm	63 g	7201040	4,83
flat blade screwdriver	5,5 x 125 mm	81 g	7201055	5,95
flat blade screwdriver	6,5 x 150 mm	116 g	7201065	6,79
flat blade screwdriver	8,0 x 175 mm	161 g	7201080	7,93
flat blade screwdriver	10,0 x 200 mm	192 g	7201100	9,33

cross sloted screwdriver Philips

- EN 60900
- blade chrome-vanadium-molydaen-steel, continuously hardened, brunished
- on the blade direct squirted protection insulation
- with power-form-hilt

1000 V

description	size	weigth	Article	euro
cross sloted screwdriver	0 x 60 mm	36 g	7202000	4,04
cross sloted screwdriver	1 x 80 mm	61 g	7202001	4,75
cross sloted screwdriver	2 x 100 mm	104 g	7202002	5,85
cross sloted screwdriver	3 x 150 mm	171 g	7202003	7,54
cross sloted screwdriver	4 x 200 mm	257 g	7202004	10,62

cross sloted screwdriver Prozidrive

- EN 60900
- blade chrome-vanadium-molydaen-steel, continuously hardened, brunished
- on the blade direct squirted protection insulation
- with power-form-hilt

1000 V

description	size	weigth	Article	euro
cross sloted screwdriver Prozidrive	0 x 60 mm	37 g	7214000	4,76
cross sloted screwdriver Prozidrive	1 x 80 mm	61 g	7214001	5,41
cross sloted screwdriver Prozidrive	2 x 100 mm	104 g	7214002	6,84
cross sloted screwdriver Prozidrive	3 x 150 mm	171 g	7214003	8,89

electronic screwdriver

- EN 60900
- for sloted screws
- special-steel, brunished
- on the blade direct squirted protection insulation

1000 V

description	size	weigth	Article	euro
electronic screwdriver	1,5 x 40 mm	11 g	7211015	5,36
electronic screwdriver	2,0 x 60 mm	13 g	7211020	5,36
electronic screwdriver	3,0 x 75 mm	15 g	7211030	5,36

bent male hex key with handel

- vanadium-steel,
- for inside-screws
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
	SW 3	20 g	7210030	7,36
bent male hex key with handel	SW 4	25 g	7210040	7,50
bent male hex key with handel	SW 5	45 g	7210050	7,80
bent male hex key with handel	SW 6	60 g	7210060	7,80
bent male hex key with handel	SW 7	80 g	7210070	10,10
bent male hex key with handel	SW 8	110 g	7210080	10,73
bent male hex key with handel	SW 10	230 g	7210100	10,90

straight male hex driver with handel

- EN 60900
- blade chrome-vanadium-molydaen-steel, continuously hardened, brunished
- on the blade dircet squirted protection isolation
- with power-form-grip

1000 V

description	size	weigth	Article	euro
straight male hex driver with handel	SW 4	82 g	7203040	7,85
straight male hex driver with handel	SW 5	85 g	7203050	7,85
straight male hex driver with handel	SW 6	85 g	7203060	8,75
straight male hex driver with handel	SW 8	124 g	7203080	9,65

flat blade screwdriver, T-handel

- EN 60900
- blade chrome-vanadium-molydaen-steel, continuously hardened, brunished
- PVC-dip-isolated, shock-resistant

1000 V

description	size	weigth	Article	euro
flat blade screwdriver, T-handel	1,0 x 7 x 170 mm	72 g	7205007	11,65
flat blade screwdriver, T-handel	1,2 x 9 x 200 mm	90 g	7205009	12,25
flat blade screwdriver, T-handel	1,6 x 10 x 230 mm	106 g	7205010	13,80
flat blade screwdriver, T-handel	2,0 x 13 x 250 mm	143 g	7205013	14,90

male hex key, T-handel 95 mm

- EN 60900
- male hex key
- blade chrome-vanadium-molydaen-steel, continuously hardened, brunished
- PVC-dip-isolated, shock-resistant
- T-handle: 95 mm

1000 V

description	lenght	size	weigth	Article	euro
male hex key	120 mm	SW 4	250 g	7206042	12,00
male hex key	120 mm	SW 5	250 g	7206052	12,26
male hex key	120 mm	SW 6	250 g	7206062	12,66

male hex key, T-handel 95 mm

- EN 60900
- male hex key
- blade chrome-vanadium-molydaen-steel, continuously hardened, brunished
- PVC-dip-isolated, shock-resistant
- T-handle 95 mm

1000 V

description	lenght	size	weigth	Article	euro
male hex key	160 mm	SW 4	270 g	7206040	12,60
male hex key	160 mm	SW 5	270 g	7206050	12,87
male hex key	160 mm	SW 6	290 g	7206060	13,29
male hex key	160 mm	SW 8	325 g	7206080	13,48
male hex key	200 mm	SW 10	390 g	7206100	14,63

male hex key, T-handel 65 mm

- EN 60900
- male hex key
- blade chrome-vanadium-molydaen-steel, continuously hardened, brunished
- PVC-dip-isolated, shock-resistant
- T-handel 65 mm

1000 V

description	lenght	size	weigth	Article	euro
male hex key	120 mm	SW 3	210 g	7206031	11,25
male hex key	120 mm	SW 4	220 g	7206041	11,25
male hex key	120 mm	SW 5	220 g	7206051	11,25
male hex key	120 mm	SW 6	220 g	7206061	11,25

female hex key driver

- EN 60900
- blade chrome-vanadium-molydaen-steel, continuously hardened, brunished
- inside-borehole for juted out threadstaff
- on the blade direct squirted protection insulation
- with power-form-hilt

1000 V

description	size	weigth	Article	euro
female hex key driver	SW 4	72 g	7204040	6,84
female hex key driver	SW 5	77 g	7204050	6,84
female hex key driver	SW 5,5	95 g	7204055	6,92
female hex key driver	SW 6	101 g	7204060	7,13
female hex key driver	SW 7	122 g	7204070	7,69
female hex key driver	SW 8	124 g	7204080	8,83
female hex key driver	SW 9	128 g	7204090	9,26
female hex key driver	SW 10	138 g	7204100	9,46
female hex key driver	SW 11	182 g	7204110	10,11
female hex key driver	SW 12	191 g	7204120	11,12
female hex key driver	SW 13	194 g	7204130	12,34
female hex key driver	SW 14	208 g	7204140	13,23
female hex key driver	SW 15	219 g	7204150	15,69
female hex key driver	SW 16	238 g	7204160	15,69
female hex key driver	SW 17	253 g	7204170	15,09

bent screwdriver, blade diagonally

- for sloted screws
- blade chrome-vanadium-steel, brunished
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
bent screwdriver	0,6 x 4,5 mm	13 g	7208045	8,36
bent screwdriver	0,8 x 5,5 mm	14 g	7208055	9,18
bent screwdriver	1,0 x 7,0 mm	34 g	7208070	9,79

bent screwdriver, blade longitudinally

- for sloted screws
- blade chrome-vanadium-steel, brunished
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
bent screwdriver	0,6 x 4,5 mm	13 g	7207045	8,36
bent screwdriver	0,8 x 5,5 mm	14 g	7207055	9,18
bent screwdriver	1,0 x 7,0 mm	34 g	7207070	9,79

bent screwdriver Philips

- for cross-sloted screws
- chrome-vanadium-molydaen-steel, brunished
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
bent screwdriver Philips	PH 0 x 90	8 g	7209000	8,84
bent screwdriver Philips	PH 1 x 105	18 g	7209001	9,07
bent screwdriver Philips	PH 2 x 150	31 g	7209002	9,71

wing nut key, not insulated

unsuiteable for work under voltage!!!

- to loosen wing nut keys at counter armatures
- chrome-vanadium-steel
- power-form-hilt

description	size	weigth	Article	euro
wing nut key	165 mm	95 g	7213000	20,94

wing nut key, insulated

- to loosen wing nut keys at counter armatures
- chrome-vanadium-steel
- on the blade direct squirted protection insulation
- power-form-hilt
- EN 60900

1000 V

description	size	weigth	Article	euro
wing nut key, insulated	145 mm	122 g	7215000	29,70

screw holder

- for sloted screws
- chrome-vanadium-steel with inserted spring lamellas
- on the blade squirted protection insulation
- with power-form-hilt
- EN 60900

description	size	weigth	Article	euro
screw holder	3 x 120 mm	96 g	7212030	20,37
screw holder	6 x 120 mm	100 g	7212060	22,16
screw holder	10 x 120 mm	104 g	7212100	23,06

assembly grip

- used by safety-border-change under voltage
- with indoor bundle M12 for standing bolts
- according to EN 60900

1000 V

description	lenght	weigth	Article	euro
assembly grip	250 mm	140 g	7205000	87,36

torque - screwdriver

- EN 60900
- continuously variable adjustable torque with gauge in a windowed scale
- clicking-signal by reaching the adjusted torque
- for controlled screwing in the field of voltage-leading parts up to 1000 V
- without blade
- different blades are avialable
- baldes out of high-quality chrome-vanadium-molydaen-steel
- delivery in plastiboxes
- insulation directly squirted on the blade

1000 V

description	lenght	size	Article	euro
torque - screwdriver	150 mm	1 - 5 Nm	7358000	108,25
replacement blade, slot	190 mm	3,5	7358001	5,04
replacement blade, slot	190 mm	4,0	7358002	5,04
replacement blade, slot	190 mm	5,5	7358003	5,04
replacement blade, cross	190 mm	PH 0	7358004	5,04
replacement blade, cross	190 mm	PH 1	7358005	5,04
replacement blade, cross	190 mm	PH 2	7358006	5,04
replacement blade, cross	190 mm	PZ 0	7358007	5,04
replacement blade, cross	190 mm	PZ 1	7358008	5,04
replacement blade, cross	190 mm	PZ 2	7358009	5,04

female socket 3/8"

- chrome-vanadium-steel, forged, oil hardened
- with 3/8" -four-sided drive
- 12-sided wrench widths
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
female socket	SW 6	30 g	7319060	10,83
female socket	SW 7	30 g	7319070	10,83
female socket	SW 8	30 g	7319080	10,83
female socket	SW 9	35 g	7319090	10,83
female socket	SW 10	35 g	7319100	11,43
female socket	SW 11	35 g	7319110	11,43
female socket	SW 12	40 g	7319120	11,70
female socket	SW 13	40 g	7319130	11,70
female socket	SW 14	40 g	7319140	11,70
female socket	SW 15	45 g	7319150	11,94
female socket	SW 16	45 g	7319160	11,94
female socket	SW 17	50 g	7319170	12,11
female socket	SW 18	50 g	7319180	12,11
female socket	SW 19	60 g	7319190	12,11
female socket	SW 20	60 g	7319200	12,31
female socket	SW 21	60 g	7319210	12,61
female socket	SW 22	60 g	7319220	12,52
female socket	SW 24	60 g	7319240	12,88

female socket 3/8", long series

- chrome-vanadium-steel, forged, oil hardened
- with 3/8" -four-sided drive
- 12-sided wrench widths
- length 55 - 65 mm
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
female socket long	SW 10	60 g	7320100	20,41
female socket long	SW 11	60 g	7320110	18,35
female socket long	SW 12	70 g	7320120	18,35
female socket long	SW 13	70 g	7320130	18,35
female socket long	SW 14	80 g	7320140	18,92
female socket long	SW 15	80 g	7320150	20,73
female socket long	SW 16	110 g	7320160	20,97
female socket long	SW 17	110 g	7320170	19,74
female socket long	SW 18	145 g	7320180	19,93
female socket long	SW19	180 g	7320190	21,47
female socket long	SW 22	180 g	7320220	20,34

female socket 3/8" (extra long)

- chrome-vanadium-steel, forged, oil hardened
- with 3/8" four-sided drive
- 12-sided wrench widths
- length 125 mm
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
female socket 3/8" (extra long)	SW 10	180 g	7333010	30,11
female socket 3/8" (extra long)	SW 11	185 g	7333011	30,11
female socket 3/8" (extra long)	SW 12	200 g	7333012	30,11
female socket 3/8" (extra long)	SW 13	210 g	7333013	29,91
female socket 3/8" (extra long)	SW 14	220 g	7333014	29,91
female socket 3/8" (extra long)	SW 17	240 g	7333017	30,64
female socket 3/8" (extra long)	SW 19	260 g	7333019	37,53
female socket 3/8" (extra long)	SW 22	280 g	7333022	30,16

male socket 80 mm 3/8"

- EN 60900
- chrome-vanadium-steel, forged, oil hardened
- with 3/8" -four-sided drive
- PVC-dip-isolated, shock-resistant

1000 V

description	size	weigth	Article	euro
	SW 3	45 g	7324030	14,70
male socket	SW 4	45 g	7324040	14,70
male socket	SW 5	50 g	7324050	15,56
male socket	SW 6	50 g	7324060	15,87
male socket	SW 8	65 g	7324080	16,37
male socket	SW 10	80 g	7324100	14,48

male socket 100 mm 3/8"

- EN 60900
- chrome-vanadium-steel, forged, oil hardened
- with 3/8" -four-sided drive
- PVC-dip-isolated, shock-resistant

1000 V

description	size	weigth	Article	euro
male socket	SW 4	80 g	7334004	14,81
male socket	SW 5	80 g	7334005	14,81
male socket	SW 6	85 g	7334006	14,81
male socket	SW 8	95 g	7334008	15,04
male socket	SW 10	105 g	7334010	15,21
male socket	SW 12	125 g	7334012	15,55

male socket 250 mm 3/8"

- EN 60900
- chrome-vanadium-steel, forged, oil hardened
- with 3/8" -four-sided drive
- PVC-dip-isolated, shock-resistant

1000 V

description	size	weigth	Article	euro
male socket	SW 5	115 g	7339005	15,83
male socket	SW 6	120 g	7339006	15,83
male socket	SW 8	140 g	7339008	16,32
male socket	SW 10	170 g	7339010	16,76

extension 3/8"

- with tension-closable locking at four-sided against unwanted loosen sockets
- chrome-vanadium-steel, forged, oil hardened
- PVC-dip-isolated, shock-resistant

1000 V

description	size	weigth	Article	euro
extension 3/8"	125 mm	140 g	7321125	21,38
extension 3/8"	250 mm	280 g	7321250	22,85

extention 3/8" closable

- EN 60900
- chrome-vanadium-steel, forged
- PVC-dip-isolated, shock-resistant
- insets will be fixed by spreading of the ball
- automatic lock while setting on the fortification
- observe the sequenz:
  push first the inset on the extension, then attach the operation tool
- suitable for screw insets

1000 V

description	lenght	weigth	Article	euro
extention	250 mm	310 g	7322250	62,27
extention	125 mm	150 g	7322125	62,27

T-wrench 3/8"

- EN 60900
- chrome-vanadium-steel, forged, oil hardened
- PVC-dip-isolated, shock-resistant
- with tension-closable locking at four-sided

1000 V

description	size	weigth	Article	euro
T-wrench	160 mm	490 g	7322160	17,35

adjustment tool 3/8"

- EN 60900
- for adjusting of sector form conductors 3/8" connection-four-sided
- made of shock-resistant

1000 V

description	size	weigth	Article	euro
adjustment tool	95 - 150 mm²	80 g	7510095	38,08
adjustment tool	185 - 240 mm²	140 g	7510150	58,29

reversible ratchet spanner 3/8"

- EN 60900
- chrome-vanadium-steel, forged
- PVC-dip-isolated, shock-resistant
- reversible right- and left-drive
- simple locking of the attchment tools by tension-closable locking at four-sided drive

1000 V

description	size	weigth	Article	euro
reversible ratchet spanner	190 mm	30g	7308201	58,81

reversible ratchet spanner 3/8", pressure locking

- EN 60900
- chrome-vanadium-steel, forged, oil-hardened
- PVC-dip-isolated, shock-resistant
- reversible right- and left-drive
- with special pressure locking system against unwanted loosen of insets

1000 V

description	size	weigth	Article	euro
reversible ratchet spanner	190 mm	370 g	7308251	78,45

torque - wrench 3/8"

- EN 60900
- PVC-dip-isolated, shock-resistant
- with included switch device
- very simple tool changing by pushing the button
- 280 mm adjustable 2 -26 Nm
- 370 mm adjustalbe 5 -50 Nm
- reversible right- and left-drive

1000 V

description	size	weigth	Article	euro
torque - wrench 3/8"	280 mm	920 g	7318280	269,81
torque - wrench 3/8"	370 mm	1070 g	7318370	275,19

torque wrench 3/8" 200 mm

- EN 60900
- with included switch device
- 200 mm adjustable 2 -25 Nm
- reversible right- and left-drive

1000 V

description	size	weigth	Article	euro
torque wrench	200 mm	440 g	7318200	261,91

torque limiter 3/8"

- EN 60900
- PVC-dip-isolated, shock-resistant
- locking possibility for all insets 3/8"

1000 V

description	size	weigth	Article	euro
torque limiter	12 Nm	310 g	7335012	96,44
torque limiter	18 Nm	310 g	7335018	96,44
torque limiter	25 Nm	310 g	7335025	96,44

torque -T- wrench 3/8"

- EN 60900
- PVC-dip-isolated, shock-resistant

1000 V

description	size	weigth	Article	euro
torque -T- wrench	12 Nm	540 g	7340012	123,10
torque -T- wrench	18 Nm	540 g	7340018	123,10
torque -T- wrench	25 Nm	540 g	7340025	123,10

reducer 1/2" to 3/8"

- EN 60900
- chrome-vanadium-steel, forged, oil hardened
- PVC-dip-isolated, shock-resistant Chrom-Vanadium-Stahl, geschmiedet
- without locking device

1000 V

description	size	weigth	Article	euro
reducer	40 mm	70 g	7317000	20,38

enlarger 3/8" to 1/2"

- EN 60900
- chrome-vanadium-steel, forged, oil hardened
- PVC-dip-isolated, shock-resistant
- without locking device

1000 V

description	size	weigth	Article	euro
enlarger	50 mm	70 g	7316000	19,89

female socket 1/2"

- chrome-vanadium-steel, forged, oil hardened
- with 1/2" -four-sided-drive
- 6-sided wrench widths
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
female socket	SW 7	65 g	7303070	10,11
female socket	SW 8	70 g	7303080	10,11
female socket	SW 9	65 g	7303090	10,28
female socket	SW 10	70 g	7303100	10,28
female socket	SW 11	75 g	7303110	10,28
female socket	SW 12	75 g	7303120	10,65
female socket	SW 13	75 g	7303130	10,85
female socket	SW 14	80 g	7303140	10,99
female socket	SW 15	80 g	7303150	15,48
female socket	SW 16	85 g	7303160	11,37
female socket	SW 17	90 g	7303170	11,57
female socket	SW 18	85 g	7303180	11,72
female socket	SW 19	100 g	7303190	11,87
female socket	SW 20	100 g	7303200	12,24
female socket	SW 21	120 g	7303210	12,24
female socket	SW 22	120 g	7303220	12,50
female socket	SW 23	120 g	7303230	12,50
female socket	SW 24	140 g	7303240	12,59
female socket	SW 26	175 g	7303260	12,86
female socket	SW 27	190 g	7303270	13,02
female socket	SW 28	195 g	7303280	13,41
female socket	SW 30	230 g	7303300	13,66
female socket	SW 32	280 g	7303320	14,08
female socket	SW 34	310 g	7303340	18,48
female socket	SW 36	350 g	7303360	21,65

female socket 1/2" (long)

- chrome-vanadium-steel, forged, oil hardened
- with 1/2" -four-sided-drive
- 6-sided or 12-sided wrench widths
- length 80 mm
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
female socket 1/2"(long)	SW 10	110 g	7304100	17,09
female socket 1/2"(long)	SW 11	130 g	7304110	17,09
female socket 1/2"(long)	SW 12	145 g	7304120	17,09
female socket 1/2"(long)	SW 13	145 g	7304130	17,09
female socket 1/2"(long)	SW 14	145 g	7304140	17,31
female socket 1/2"(long)	SW 15	145 g	7304150	17,55
female socket 1/2"(long)	SW 16	160 g	7304160	17,79
female socket 1/2"(long)	SW 17	180 g	7304170	17,89
female socket 1/2"(long)	SW 18	190 g	7304180	18,31
female socket 1/2"(long)	SW 19	210 g	7304190	18,62
female socket 1/2"(long)	SW 21	215 g	7304210	19,23
female socket 1/2"(long)	SW 22	230 g	7304220	19,57
female socket 1/2"(long)	SW 23	235 g	7304230	20,78
female socket 1/2"(long)	SW 24	250 g	7304240	20,78
female socket 1/2"(long)	SW 27	390 g	7304270	22,62
female socket 1/2"(long)	SW 30	420 g	7304300	27,03
female socket 1/2"(long)	SW 32	460 g	7304320	27,12

female socket 1/2" (extra long)

- chrome-vanadium-steel, forged, oil hardened
- with 1/2" -four-sided-drive
- 12-sided wrench widths
- length 125 mm
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
female socket	SW 13	250 g	7328013	27,21
Steckschlüssel-Einsatz	SW 14	260 g	7328014	28,32
Steckschlüssel-Einsatz	SW 17	280 g	7328017	27,38
Steckschlüssel-Einsatz	SW 19	295 g	7328019	27,38
Steckschlüssel-Einsatz	SW 22	310 g	7328022	28,35
Steckschlüssel-Einsatz	SW 24	330 g	7328024	28,59
Steckschlüssel-Einsatz	SW 27	350 g	7328027	29,24
Steckschlüssel-Einsatz	SW 30	380 g	7328030	35,96
Steckschlüssel-Einsatz	SW 32	410 g	7328032	29,62

female socket 1/2" (etxra long)

- chrome-vanadium-steel, forged, oil hardened
- with 1/2" -four-sided-drive
- 12-sided wrench widths
- length 255mm
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
female socket	SW 13	485 g	7329013	28,40
female socket	SW 14	500 g	7329014	28,40
female socket	SW 17	530 g	7329017	28,58
female socket	SW 19	550 g	7329019	28,58
female socket	SW 22	580 g	7329022	29,52
female socket	SW 24	605 g	7329024	29,78
female socket	SW 27	635 g	7329027	30,45
female socket	SW 30	660 g	7329030	30,45
female socket	SW 32	670 g	7329032	30,82

male socket 80 mm 1/2"

- with 1/2" -four-sided-drive
- chrome-vanadium-steel, forged, oil hardened
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
male socket	SW 4	80 g	7305040	14,69
male socket	SW 5	80 g	7305050	15,56
male socket	SW 6	85 g	7305060	15,87
male socket	SW 8	95 g	7305080	15,87
male socket	SW 10	105 g	7305100	19,47

male socket 100mm 1/2"

- with 1/2" -four-sided-drive
- chrome-vanadium-steel, forged, oil hardened
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
male socket	SW 5	100 g	7331005	14,99
male socket	SW 6	100 g	7331006	14,99
male socket	SW 8	110 g	7331008	15,23
male socket	SW 10	110 g	7331010	15,46
male socket	SW 12	160 g	7331012	15,99

male socket 250 mm 1/2"

- with 1/2" -four-sided-drive
- chrome-vanadium-steel, forged, oil hardened
- PVC-dip-isolated according to EN 60900, shock-resistant

1000 V

description	size	weigth	Article	euro
male socket	SW 5	165 g	7331050	16,88
male socket	SW 6	175 g	7331060	17,07
male socket	SW 8	190 g	7331080	17,42
male socket	SW 10	225 g	7331100	18,83

extension 1/2"

- with tension-closable locking at four-side-square against unwanted loosen of
  sockets
- chrome-vanadium-steel, forged, oil hardened
- PVC-dip-isolated, shock-resistant

1000 V

description	size	weigth	Article	euro
extension 1/2"	125 mm	190 g	7306125	21,87
extension 1/2"	250 mm	400 g	7306250	23,80

extension 1/2", closable

- EN 60900, 1/2"
- chrome-vanadium-steel, forged
- PVC-dip-isolated, shock-resistant
- insets will be fixed by spreading of the ball
- automatic lock while setting on the fortification
- observe the sequenz:
  push first the inset on the extension, then attach the operation tool
- suitable for screw insets

1000 V

description	lenght	weigth	Article	euro
extension	125 mm	220 g	7306126	66,99
extension	250 mm	430 g	7306251	66,99

T- wrench 1/2"

- EN 60900
- chrome-vanadium-steel, forged
- PVC-dip-isolated, shock-resistant
- with tension-closable locking at four-sided-square

1000 V

description	size	weigth	Article	euro
T- wrench	200 mm	490 g	7311160	18,45

adjustment tool 1/2"

- EN 60900
- for adjusting of sector form conductors 3/8" connection-four-sided
- made of shock-resistant

1000 V

description	size	weigth	Article	euro
adjustment tool	95 - 150 mm²	80 g	7509150	38,08
adjustment tool	185 - 240 mm²	140 g	7509240	58,58

bent wrench 1/2"

- EN 60900
- chrome-vanadium-steel, forged
- PVC-dip-isolated, shock-resistant
- with tension-closable locking at four-sided-square

1000 V

description	size	weigth	Article	euro
bent wrench 1/2"	195 mm	260 g	7310195	16,71

reversible ratchet spanner 1/2"

- EN 60900
- chrome-vanadium-steel, forged, oil-hardend
- PVC-dip-isolated, shock-resistant
- reversible right- and left-drive
- simple locking of the attchment tools by tension-closable locking at four-edge

1000 V

description	size	weigth	Article	euro
reversible ratchet spanner 1/2"	260 mm	650 g	7308200	63,13

reversible ratchet spanner 1/2"

- EN 60900
- chrome-vanadium-steel, forged, oil-hardened
- PVC-dip-isolated, shock-resistant
- reversible right- and left-drive
- with special pressure locking system against unwanted loosen of insets

1000 V

description	size	weigth	Article	euro
reversible ratchet spanner 1/2"	260 mm	750 g	7308250	82,44

torque wrench 1/2" 200 mm

- EN 60900
- with included switch device
- 200 mm adjustable 2 -25 Nm
- reversible right- and left-drive

1000 V

description	size	weigth	Article	euro
torque wrench	200 mm	490 g	7309200	261,91

torque - wrench 1/2"

- EN 60900
- with included switch device
- very simple tool changing by pushing the button
- 280 mm adjustable 2 -26 Nm
- 370 mm adjustalbe 5 -50 Nm
- reversible right- and left-drive
- with special pressure locking system against unwanted loosen of insets

1000 V

description	size	weigth	Article	euro
torque - wrench	280 mm	930 g	7309280	269,81
torque - wrench	370 mm	1100 g	7309370	275,19

storage bag for torque wrench

- for carrying and safekeeping of the torque wrench
- empty

description	size	weigth	Article	euro
storage bag	440 x 170 x 80 mm	900 g	7520000	65,76

T-wrench 200 mm

- EN 60900
- out of precision steel tube, hardened
- PVC-dip-isolated, shock-resistant
- for admission of very long thread-bolts

1000 V

description	size	weigth	Article	euro
T-wrench	SW 10	320 g	7341010	20,79
T-wrench	SW 11	380 g	7341011	20,79
T-wrench	SW 12	370 g	7341012	20,79
T-wrench	SW 13	370 g	7341013	20,79
T-wrench	SW 14	370 g	7341014	21,17
T-wrench	SW 16	420 g	7341016	21,44
T-wrench	SW 17	430 g	7341017	21,44
T-wrench	SW 18	460 g	7341018	22,18
T-wrench	SW 19	440 g	7341019	22,18
T-wrench	SW 22	570 g	7341022	23,25
T-wrench	SW 24	590 g	7341024	23,63

cross - wrench

- with steel-6-sided sockets
- 6-sided sockets haven't any connection to each other, because of the full plastic insulation shaft 140x140 mm
- fully insulated - PVC-hard, squirted, shock-resistant

1000 V

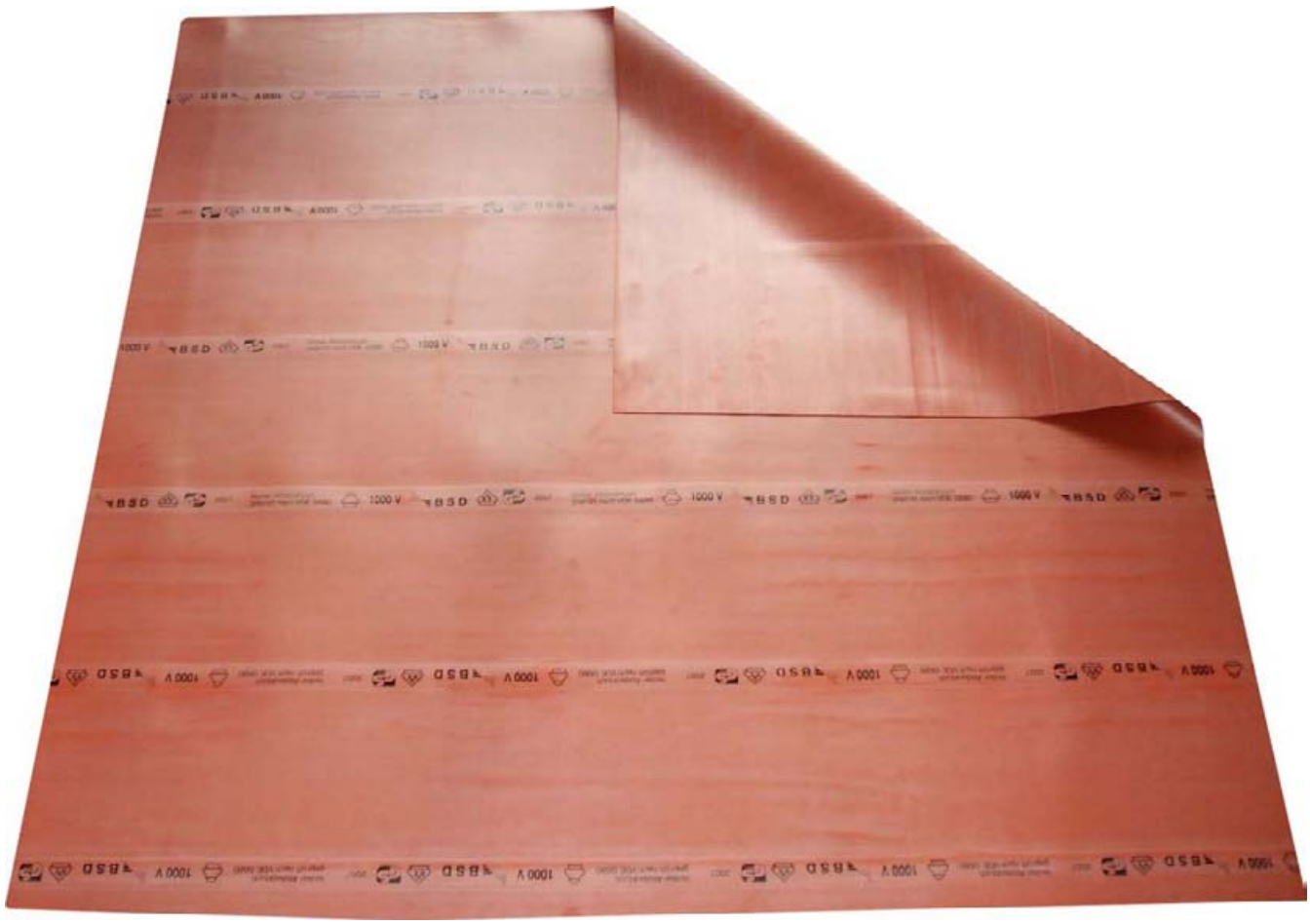
description	size	weigth	Article	euro
cross - wrench	SW 9/11/12/19	210 g	7120150	39,05
cross - wrench	SW 10/13/14/17	230 g	7120151	40,54

insulation fabric, 1mm

- out of rubber, orange
- light- and ageing resistant
- possible delivery up to 10 m on rolls
- price of 1 m current commodity
- continuous with 1-marking gang role nr. 7 416 120
- continuous with 3-marking gang role nr. 7 416 122
- other sizes avialabel on request

1000 V

description	size	weigth	Article	euro
insulation fabric	1,2 x 1,0 m	1800 g	7416120	66,86
insulation fabric	1,2 x 1,0 m	1800 g	7416122	70,68
	1,2 x 1,0 m	1800 g	7416166	73,33



insulation fabric, 1mm, cut

- out of rubber, orange, cut
- 1 mm thickness
- light- and ageing resistant
- up to 1000 V

1000 V

description	size	weigth	Article	euro
insulation fabric	200 mm x 350 mm		7416125	5,46
insulation fabric	600 mm x 600 mm		7416124	26,78
insulation fabric	800 mm x 800 mm		7416123	45,47
insulation fabric	1500 mm x 200 mm		7416150	25,15

isolation fabric, 1.6mm

- out of rubber, orange
- light- and ageing resistant
- width 1200mm
- possible delivery up to 10 m on rolls
- price of 1 m current commodity
- continuous with 1-marking gang role nr. 7 416 120
- up to 1000 V

1000 V

description	size	weigth	Article	euro
isolation fabric	200 mm x 350 mm		7416129	5,99
isolation fabric	600 mm x 600 mm		7416128	30,35
isolation fabric	800 mm x 800 mm		7416127	51,24
isolation fabric	1200 mm x 1000 mm		7416126	78,23
isolation fabric	1200 mm x 1200 mm		7416130	91,40

location insulation 4mm

- out of 4 mm-tick rubber, grey
- light- and ageing resistant
- surface abraded for secure standing
- possible delivery up to 10 m on rolls
- price of 1 m current commodity

1000 V

description	size	weigth	Article	euro
location insulation	1,0 x 1,0 m	4,3 kg	7417010	63,04

insulation mat 4,0 mm, groved bearing surface

- location insulation for switching-rooms according to VDE 303
- strength 4,0 mm
- colour light-grey
- width 1,0 and 1,2 m
- top finely groved, underside material patterned
- possible delivery up to 10 m on rolls
- vulkanetten-ribbon at the underside

description	size	weigth	Article	euro
insulation mat	1,0 x 1,0 m	4,9 kg	7417015	36,02
insulation mat	1,2 x 1,0 m	5,9 kg	7417020	40,57

insulation mat 4,0 mm, mosaic bearing surface

- location insulation for switching-rooms according to VDE 303
- strength 4,0 mm
- colour light-grey
- width 1,0 and 1,2 m
- top raised mosaic , underside material patterned
- because of that higher footstep firmness
- possible delivery up to 10 m on rolls

description	size	weigth	Article	euro
insulation mat	1,0 x 1,0 m	4,7 kg	7417030	on request
insulation mat	1,0 x 1,2 m	5,8 kg	7417040	on request

insulation mat 4,0 mm, smooth top

- location insulation for switching-rooms according to VDE 303
- strength 4,0 mm
- colour light-grey
- width 1,0 and 1,2 m
- top smooth, underside material patterned
- possible delivery up to 10 m on rolls

description	size	weigth	Article	euro
insulation mat	1,0 x 1,0 m	4,7 kg	7417050	on request
insulation mat	1,0 x1,2 m	5,8 kg	7417060	on request

bag for rubber parts

- for admission of rubber fabric and safty clips
- out of synthetic material

description	size	weigth	Article	euro
storage bag	570 x 270 mm	360 g	7518004	18,25

bag for location insulation

- for admission of location insulation

description	size	weigth	Article	euro
storage bag	420 x 300 x 100 mm	1 kg	7518006	58,50

cover tape

- self-adhesive
- PVC, soft
- on rolls a,- 8m

1000 V

description	width	weigth	Article	euro
cover tape	50 mm	100 g	7413000	10,28

insulation attachment, round

- one-sided closed out of though-flexible synthetic material
- for insulation of singel-wires

1000 V

description	lenght	diameter	size	weigth	Article	euro
insulation attachment	40 mm	2 mm	1,5 mm²	0,5 g	7411002	0,36
insulation attachment	40 mm	3 mm	2,5 mm²	1,0 g	7411003	0,38
insulation attachment	40 mm	5 mm	10 mm²	4,0 g	7411005	0,81
insulation attachment	50 mm	7 mm	16 mm²	5,0 g	7411007	0,89
insulation attachment	60 mm	9 mm	35 mm²	6,0 g	7411009	0,96
insulation attachment	70 mm	10 mm	50 mm²	8,0 g	7411010	1,28
insulation attachment	70 mm	12 mm	70 mm²	11,0 g	7411012	1,30
insulation attachment	110 mm	15 mm	120 mm²	16,0 g	7410015	1,93
insulation attachment	110 mm	20 mm	150 mm²	19,0 g	7410020	2,11
insulation attachment	110 mm	25 mm	185 mm²	28,0 g	7410025	2,42
insulation attachment	110 mm	30 mm	240 mm²	35,0 g	7410030	2,68
insulation attachment	100 mm	40 mm	300 mm²	55,0 g	7410040	3,25

insulation attachment, conical

- one-sided closed
- conical version
- out of though-flexible synthetic material
- for insulation of singel-wires

1000 V

description	lenght	diameter	size	weigth	Article	euro
insulation attachment		4x50 mm	bis 6 mm²	2,0 g	7426051	0,63
insulation attachment		6x40 mm	bis 10 mm²	3,0 g	7426006	0,66
insulation attachment		6x60 mm	bis 10 mm²	4,0 g	7426007	0,76
		10x30 mm	bis 50 mm²	4,0 g	7426014	0,74
insulation attachment		10x80 mm	bis 50 mm²	6,0 g	7426010	0,97
insulation attachment		12x90 mm	bis 70 mm²	8,0 g	7426012	1,22
insulation attachment		20x110 mm	bis 150 mm²	22 g	7426020	1,95

insulation attachment, oval

- one-sided closed out of though-flexible synthetic material, 140 mm long
- for insulation of wire-bundle or NKBA-cable

1000 V

description	size	weigth	Article	euro
insulation attachment	30 x 60 x 140 mm	83 g	7409030	3,61
insulation attachment	40 x 80 x 140 mm	97 g	7409040	4,05

insulation attachment, self-clipping insulation attachment

- for insulation of singel-wires
- out of though-flexible synthetic material
- with cross-cut

1000 V

description	lenght	diameter	size	weigth	Article	euro
self-clipping attachment	75 mm	10 mm		10 g	7409001	1,88
self-clipping attachment	100 mm	15 mm		15 g	7409015	1,95
self-clipping attachment	100 mm	20 mm		20 g	7409002	2,05
self-clipping attachment	120 mm	30 mm		40 g	7409003	2,45
self-clipping attachment	135 mm	40 mm		55 g	7409004	3,64
self-clipping attachment	155 mm	50 mm		95 g	7409005	5,45
self-clipping attachment	130 mm	60 mm		105 g	7409006	6,67

case for insulation attachments

- sqarely, with cover
- out of synthetic material
- for storage of insulation attachments

description	size	weigth	Article	euro
case for insulation attachments	170 x 130 x 37 mm	80 g	7412000	6,25

safety clips

- with PE-all-plastic hard, red
- with inserted spring, not contactable from outside

1000 V

description	size	weigth	Article	euro
safety clips	80 mm	30 g	7117080	6,77
safety clips	150 mm	70 g	7117150	6,90

lower part cover

- offers protection for rash connection on rather inserting of NH-fuses
- to use with NH-putting-on-grip
- offers safety against restart for remoted from connection place working electricians
- with marking: "Nicht einschalten - Gefahr", ("Do not connect - danger")

1000 V

description	size	weigth	Article	euro
lower part cover	00	50 g	7425002	7,89

lower part clamp cover

- offers protection for rash connection on rather inserting of NH-fuses
- to use with NH-putting-on-grip
- offers safety against restart for remoted from connection place working electricians
- with marking: "Nicht einschalten - Gefahr", ("Do not connect - danger")

1000 V

description	size	weigth	Article	euro
lower part clamp cover	00	40 g	7425004	12,74

lower part clamp cover

- offers protection for rash connection on rather inserting of NH-fuses
- to use with NH-putting-on-grip
- offers safety against restart for remoted from connection place working electricians
- with marking: "Nicht einschalten - Gefahr", ("Do not connect - danger")

1000 V

description	size	weigth	Article	euro
lower part clamp cover	1 - 3	120 g	7425003	7,59

lower part cover

- offers protection for rash connection on rather inserting of NH-fuses
- to use with NH-putting-on-grip
- offers safety against restart for remoted from connection place working electricians
- with marking: "Nicht einschalten - Gefahr", ("Do not connect - danger")

1000 V

description	size	weigth	Article	euro
lower part cover	1 - 3	85 g	7425001	19,90

NH- fuse- plug in grip

- for inserting and changing of low voltage high performance fuses
- for nominal voltages up to 1000 V AC on rather 1500 V DC

1000 V

description	size	weigth	Article	euro
NH- fuse- plug in grip	00 und 0 - 3	470 g	7425000	40,87

protective cover for cable distribution cabinet

- for protection against contact with voltage-leading parts
- protection covering out of transparent synthetic material 1 mm thick, for covering of cable distribution cabinet
- for nominal voltages up to 1000 V

1000 V

description	width	height	deep	size	weigth	Article	euro
protective cover	550 mm	900 mm	440 mm	00	2,6 kg	7426001	216,23
protective cover	700 mm	900 mm	440 mm	0	3,2 kg	7426002	234,34
protective cover	900 mm	900 mm	440 mm	1	3,7 kg	7426003	243,89
protective cover	1300 mm	900 mm	440 mm	2	4,9 kg	7426004	278,18
protective cover	1600 mm	900 mm	440 mm	3	5,6 kg	7426005	323,89

insulation cap without cord type 1

- one winged
- sloted for overhead line-house-connetion-insulators
- without cord
- red, out of 3 mm thick, soft, weatherproof insulation material

1000 V

description	size	weigth	Article	euro
insulation cap	420 x 290 mm	700 g	7414421	16,94

insulation cap with cord type 1

- one winged
- sloted for overhead line-house-connetion-insulators
- with cord
- red, out of 3 mm thick, soft, weatherproof insulation material
- complete protection against indirect contact of voltage-loaded parts IP 2X

1000 V

description	size	weigth	Article	euro
insulation cap	420 x 290 mm	700 g	7414420	24,65

insulation cap with pushbuttons type 1

- one winged
- sloted for overhead line-house-connetion-insulators
- for durable attach
  (for example covering of construction works)
- red, out of 3 mm thick, soft, weatherproof insulation material
- completly protection against indirect contact of voltage-loaded parts IP 2X

1000 V

description	size	weigth	Article	euro
insulation cap	420 x 290 mm	700 g	7414422	22,06

insulation cap type 2

- two winged
- sloted on both sides for overhead line-mast-insulators
- red, out of 3 mm thick, soft, weatherproof insulation material

1000 V

description	size	weigth	Article	euro
Isolation cap	420 x 290 mm	700 g	7415420	18,92

insulation cap with pushbuttons type 2

- two winged
- sloted on both sides for overhead line-mast-insulators
- for durable attaching
- red, out of 3 mm thick, soft, weatherproof insulation material

1000 V

description	size	weigth	Article	euro
insulation cap	420 x 290 mm	700 g	7415421	20,55

insulation cap with pushbuttons, out of fabric

- out of rubber fabric 1 mm
- pushbuttons
- it goes without insulation hose, because of the size
- very individually useable
- light - and weatherproof

1000 V

description	size	weigth	Article	euro
insulation cap 20 pushbuttons	700 x 600 mm	700 g	7450020	38,01
insulation cap 26 pushbuttons	1200 x 600 mm	1300 g	7450026	49,77

insulation cap with pass through pushbuttons, out of fabric

- aus Gummituch 1 mm
- 10 pass through pushbuttons, mushroom form
- pushbuttons could be changed
- it goes without insulation hose, because of the size
- very individually useable
- light - and weatherproof

1000 V

description	size	weigth	Article	euro
insulation cap	1,20 x 0,35 m	725 g	7450000	60,29

insulating phase cover for overhead lines, lv

- full covering of the overhead line cable
- for diameters bis 20 mm
- assembly grip
- pulling with assembly grip
- UV - proofed
- special hole pliers serves for producing a omission on the phase cover
- therefore can phase covers indiviual be shorten and than again be connected

1000 V

description	size	weigth	Article	euro
phase cover	2,5 m	360 g	7408500	24,49
special hole pliers phase cover	180 mm	280 g	7408501	222,60
assembly grip	200 mm	160 g	7408600	40,03
assembly grip, unscrewable	200 mm	190 g	7408700	86,01

Isolating ladders

stand ladder, insulating

- fully made of synthetic material
- with VDE-report
- good coldness proofed
- simple operation

1000 V

description	size	weigth	Article	euro
stand ladder	1,9 m	10,3 kg	7432019	502,60
stand ladder	2,4 m	13,6 kg	7432025	615,80
stand ladder	3,0 m	17,2 kg	7432030	738,45
stand ladder	4,2 m	30,0 kg	7432041	1045,45

straight ladder, insulating

- fully made of synthetic material
- with VDE-report
- good coldness proofed
- simple operation

1000 V

description	size	weigth	Article	euro
straight ladder	1,9 m	4,9 kg	7431019	309,41
straight ladder	3,0 m	7,6 kg	7431030	439,54
straight ladder	4,0 m	9,8 kg	7431040	520,72

straight ladder, extendable

- fully made of synthetic material
- with VDE-report
- good coldness proofed
- simple operation
- glass-fibre strength polyester

1000 V

description	size	weigth	Article	euro
straight ladder, extendable	6,0 m	17,6 kg	7433058	on request
straight ladder, extendable	7,0 m	21,6 kg	7433070	on request
straight ladder, extendable	8,0 m	26,5 kg	7433080	on request

straight ladder, isolating twice extendable

- fully made of synthetic material
- with VDE-report
- good coldness proofed
- simple operation
- glass-fibre strength polyester

1000 V

description	size	weigth	Article	euro
straight ladder, twice extendable	7,0 m	26,5 kg	7433073	on request
straight ladder, twice extendable	9,0 m	34,2 kg	7433091	on request

holding set, insulating

- for stocking on ladders
- therefore the securing of the ladder head is garanteed

description	size	weigth	Article	euro
holding set	universal	800 g	7482000	75,61

putting a ladder up device, insulating

- for putting up at a mast
- therefore the ladder gets an optimal stability
- 16 cm diameter, for centring of the ladder to the inside conical subsided

description	size	weigth	Article	euro
putting a ladder up device	300 mm	3000 g	7483000	139,92

safety-strap with insulated fittings

- with padded dorsum support
- DIN 7470
- with synthetic belt

description	size	weigth	Article	euro
safty-strap	1/1300 mm	2,2 kg	7407001	115,98
safty-strap	2/1400 mm	2,2 kg	7407002	115,98
safty-strap	3/1500 mm	2,2 kg	7407003	115,98
safty-strap	4/1600 mm	2,2 kg	7407004	115,98
safty-strap	5/1700 mm	2,2 kg	7407005	115,98

catching belt with insulated fittings type a

- for work under voltage
- 85 mm thick body belt with two-thorn-buckle insulated
- 2 light metal lets at the side, insulated
- 1 catching let in the back
- for working at low voltage overhead lines
- delivery with catching let at the chest possible on request
- dorsum support

description	body extent	weigth	Article	euro
catching belt with insulated fittings	800 - 900 mm	2,2 kg	7408010	249,76
catching belt with insulated fittings	900 - 1000 mm	2,2 kg	7408020	249,76
catching belt with insulated fittings	1000 - 1100 mm	2,2 kg	7408030	249,76
catching belt with insulated fittings	1100 - 1200 mm	2,2 kg	7408040	249,76
catching belt with insulated fittings	1200 - 1300 mm	2,2 kg	7408050	249,76
catching belt with insulated fittings	1300 - 1400 mm	2,2 kg	7408060	249,76

spread wedge without groove

- out of synthetic material, hard, rectangular
- height 0 - 30 mm

1000 V

description	size	weigth	Article	euro
spread wedge	160x20x35 mm	60 g	7418160	7,84

spread wedge, synthetic material, red

- out of shock-resistant polyamid
- height 0 - 10 mm

1000 V

description	size	weigth	Article	euro
spread wedge	170x30x10 mm	120 g	7420300	7,31

spread wedge, synthetic material, red

- out of shock-resistant polyamid
- height 0 - 10 mm

1000 V

description	size	weigth	Article	euro
spread wedge	170x20x10 mm	100 g	7418170	13,13

spread wedge, synthetic material, oval

- out of synthetic material, oval form
- therefore no damage of the conductor insulation
- for spreading of cable

1000 V

description	size	weigth	Article	euro
spread wedge	200x30x11 mm	110 g	7420000	10,36

spread wedge, synthetic material, oval with groove

- out of synthetic material, oval form
- therefore no damage of the conductor insulation
- 22 mm width groove
- for spreading and cutting of cable
- also for cutting with the ratchet-front-cutter
  Art-Nr. 7 121 330

1000 V

description	size	weigth	Article	euro
spread wedge	220x20x28 mm	260g	7419000	15,13

Bördel-chisel

- for ground cable NKBK, NAKBA
- diameter: 25 mm
- slope 70 mm / 30 mm radius
- out of shock-resistant synthetic material, red

1000 V

description	lenght	weigth	Article	euro
Bördel-chisel	140 mm	63 g	7418140	10,22

assembly wedge for insulated overhead lines

- for insulated overhead lines
- out of synthetic material

description	size	weigth	Article	euro
assembly wedge		150 g	8148200	15,47

Tool suit case empty

tool bag

- tool bag out of red leather
- hinged, with carrying belt
- without contents

description	size	weigth	Article	euro
tool bag	270 x 300 x 145 mm	800 g	7505000	74,94

tool bag, length 270 mm

- tool bag out of red leather
- hinged, with carrying belt
- with pocket in between
- without contents

description	size	weigth	Article	euro
tool bag	270 x 305 x 170 mm	2,0 kg	7506022	145,87

tool bag, length 420 mm

- tool bag out of red leather
- hinged, with carrying belt
- with pocket in between
- without contents

description	size	weigth	Article	euro
tool bag	420 x 320 x 230 mm	3,5 kg	7506000	234,73

tool bag, length 480 mm

- tool bag out of red leather
- hinged, with carrying belt
- with pocket in between- with pocket in between
- without contents

description	size	weigth	Article	euro
tool bag	480 x 320 x 170 mm	2,5 kg	7506021	179,66

tool bag, length 480 mm

- tool bag out of red leather
- hinged, with carrying belt
- with pocket in between
- without contents

description	size	weigth	Article	euro
tool bag	480 x 320 x 170 mm	2,6 kg	7506020	190,30

tool bag , twice openable

- made of red imitation leather
- suitable space in the middle for a plastic case
- without contents

description	size	weigth	Article	euro
tool bag	460 x 370 x 230 mm	5,2 kg	7506100	224,80

tool bag, length 570 mm

- tool bag out of red leather
- hinged, with carrying belt
- with admission for cable pliers (Art-Nr. 7 119 505)
- without contents

description	size	weigth	Article	euro
tool bag	570 x 320 x 230 mm	4,1 kg	7506010	235,61

hard-top suitcase

- colour black
- with carrying belt
- without contents

description	size	weigth	Article	euro
hard-top suitcase	470 x 190 x 355 mm	3,5 kg	7509000	303,39

plastic carrying case, empty

- made of red plastic
- can be equipped with tool in size 1/2" and 3/8"
- without contents

description	size	weigth	Article	euro
plastic carrying case 1/2"	380 x 270 x 80 mm	0,9 kg	7509010	78,64
plastic carrying case 3/8"	380 x 270 x 80 mm	0,9 kg	7509020	78,64

tool bag 1 cable/-switching systems 3/8"

- tool bag equiped with insulated tools in accordance with the list:

01.	1	universal pliers 180 mm		7101180
02.	1	assembly pliers 240 mm		7111240
03.	1	cable scissors up to 180 mm²		7119505
04.	1	one hand cable cutter up to 50 mm²		7109240
05.	1	reversible ratchet 3/8"		7308251
06.	1	T-wrench 3/8"		7322160
07.	1	extension 3/8"	250 mm	7321250
08.	1	male six-sided socket 3/8"	SW 4	7324040
09.	1	dto.	SW 5	7324050
10.	1	dto.	SW 6	7324060
11.	1	dto.	SW 8	7324080
12.	1	cable knife		7124180
13.	1	plastic hammer		7130050
14.	1	sloted screwdriver	3,5x100 mm	7201035
15.	1	dto.	5,5x125 mm	7201055
16.	1	cross-slote screwdriver	size 1	7202001
17.	1	dto.	size 2	7202002
18.	1	male six-sided screwdriver w. angle	SW 4	7210040
19.	1	dto.	SW 5	7210050
20.	1	dto.	SW 6	7210060
21.	1	dto.	SW 8	7210080
22.	1	open ended spanner	SW 10	7301100
23.	1	dto.	SW 11	7301110
24.	1	dto.	SW 13	7301130
25.	1	dto.	SW 14	7301140
26.	1	dto.	SW 17	7301170
27.	1	dto.	SW 19	7301190
28.	1	dto.	SW 22	7301220
29.	1	ring spanner, bent	SW 10	7302100
30.	1	dto.	SW 13	7302130
31.	1	dto.	SW 17	7302170
32.	1	dto.	SW 19	7302190
33.	1	dto.	SW 22	7302220
34.	1	socket 3/8"	SW 8	7319080
35.	1	dto.	SW 10	7319100
36.	1	dto.	SW 13	7319130
37.	1	dto.	SW 17	7319170
38.	1	dto.	SW 19	7319190
39.	1	dto.	SW 22	7319220
40.	1	flat brush, bent	35x380 mm	7401010
41.	2	warning signs "Arbeiten unter Spannung"		7427000
42.	1	spread wedge with groove	220x20x28 mm	7419000
43.	1	spread wedge oval	200x30x11 mm	7420000
44.	10	insulation attachment, conical	6x60 mm	7426007
45.	10	dto.	12x90 mm	7426012
46.	8	insulation attachemnt, round	15x110 mm	7410015
47.	8	dto.	20x110 mm	7410020
48	5	plastic clip	80 mm	7117080
49	5	dto.	150 mm	7117150
50.	1	case for insulation attachments		7412000
51	1	leather tool bag withot contents		7506010

description	size	weigth	Article	euro
tool bag	570 x 320 x 230 mm	10,2 kg	7503100	1075,70

tool bag 1 cable/-switching systems 1/2"

- tool bag equiped with insulated tools in accordance with the list:

01.	1	universal pliers 180 mm		7101180
02.	1	assembly pliers 240 mm		7111240
03.	1	cable scissors up to 180 mm²		7119505
04.	1	one-hand cable cutter up to 50 mm²		7109240
05.	1	reversible ratchet 1/2"		7308250
06.	1	T- wrench 1/2"		7311160
07.	1	extension 1/2"	250 mm	7306250
08.	1	male six-sided socket 1/2"	SW 4	7305040
09.	1	male six-sided socket 1/2"	SW 5	7305050
10.	1	dto.	SW 6	7305060
11.	1	dto.	SW 8	7305080
12.	1	cable knife		7124180
13.	1	plastic hammer		7130050
14.	1	sloted screwdriver	3,5x100 mm	7201035
15.	1	dto.	5,5x125 mm	7201055
16.	1	cross-sloted screwdriver	size 1	7202001
17.	1	dto.	size 2	7202002
18.	1	male six-sided screwsriver w. angle	SW 4	7210040
19.	1	male six-sided screwdriver w. angle	SW 5	7210050
20.	1	dto.	SW 6	7210060
21.	1	dto.	SW 8	7210080
22.	1	open ended spanner	SW 10	7301100
23.	1	dto.	SW 11	7301110
24.	1	dto.	SW 13	7301130
25.	1	dto.	SW 14	7301140
26.	1	dto.	SW 17	7301170
27.	1	dto.	SW 19	7301190
28.	1	dto.	SW 22	7301220
29.	1	ring spanner, bent	SW 10	7302100
30.	1	dto.	SW 13	7302130
31.	1	dto.	SW 17	7302170
32.	1	dto.	SW 19	7302190
33.	1	dto.	SW 22	7302220
34.	1	socket 1/2"	SW 8	7303080
35.	1	dto.	SW 10	7303100
36.	1	dto.	SW 13	7303130
37.	1	dto.	SW 17	7303170
38.	1	dto.	SW 19	7303190
39.	1	dto.	SW 22	7303220
40.	1	flat brush, bent	35x380 mm	7401010
41.	2	warning signs "Arbeiten unter Spannung"		7427000
42.	1	spread wedge oval	200x30x11 mm	7420000
43.	1	spread wedge with groove	220x20x28 mm	7419000
44.	10	insulation attachment, conical	6x60 mm	7426007
45.	10	dto.	12x90 mm	7426012
46.	8	insulation attachment, round	15x110 mm	7410015
47.	8	dto.	20x110 mm	7410020
48.	1	caes for insulation attachment		7412000
49.	5	plastic clip	80 mm	7117080
50.	5	dto.	150 mm	7117150
51.	1	leather-tool bag without contents		7506010

description	size	weigth	Article	euro
tool bag	570 x 320 x 230 mm	10,5 kg	7503000	1079,27

tool bag 2 cable -switching systems 3/8"

- tool bag equiped with insulated tools in accordance with the list:

01.	1	universal pliers 180 mm		7101180
02.	1	telephone pliers 205 mm, straight		7106205
03.	1	one hand calble cutter up to 50 mm²		7109240
04.	1	reversible ratchet 3/8"		7308251
05.	1	T-wrench 3/8"		7322160
06.	1	extension 3/8"	250 mm	7321250
07.	1	male six-sided socket 3/8"	SW 4	7324040
08.	1	dto.	SW 5	7324050
09.	1	dto.	SW 6	7324060
10.	1	dto.	SW 8	7324080
11.	1	cable knife		7124180
12.	1	plastic hammer		7130050
13.	1	sloted screwdriver	3,5x100 mm	7201035
14.	1	dto.	5,5x125 mm	7201055
15.	1	cross-sloted screwdriver	size 1	7202001
16.	1	dto.	size 2	7202002
17.	1	male six-sided screwdriver w. angle	SW 4	7210040
18.	1	dto.	SW 5	7210050
19.	1	dto.	SW 6	7210060
20.	1	dto.	SW 8	7210080
21.	1	open ended spanner	SW 10	7301100
22.	1	dto.	SW 11	7301110
23.	1	dto.	SW 13	7301130
24.	1	dto.	SW 14	7301140
25.	1	dto.	SW 17	7301170
26.	1	dto.	SW 19	7301190
27.	1	dto.	SW 22	7301220
28.	1	ring spanner, bent	SW 10	7302100
29.	1	dto.	SW 13	7302130
30.	1	dto.	SW 17	7302170
31.	1	dto.	SW 19	7302190
32.	1	dto.	SW 22	7302220
33.	1	socket 3/8"	SW 8	7319130
34.	1	dto.	SW 10	7319100
35.	1	dto.	SW 13	7319130
36.	1	dto.	SW 17	7319170
37.	1	dto.	SW 19	7319190
38.	1	dto.	SW 22	7319220
39.	1	flat brush, bent	35x380 mm	7401010
40.	2	warning signs "Arbeiten unter Spannung"		7427000
41.	1	spread wedge with groove	220x20x28 mm	7419000
42.	1	spread wedge oval	200x30x11 mm	7420000
43.	10	insulation attachment, conical	6x60 mm	7426007
44.	10	dto.	12x90 mm	7426012
45.	8	insulation attachment, round	15x110 mm	7410015
46.	8	dto.	20x110 mm	7410020
47.	5	plastic clip	80 mm	7117080
48.	5	dto.	150 mm	7117150
49.	1	case for insulation attachments		7412000
50.	1	leather-tool bag without contents	460x370x230 mm	7506100

description	size	weigth	Article	euro
tool bag	460 x 370 x 230 mm	9,5 kg	7503500	952,43

tool bag 2 cable/-switching systems 1/2"

- tool bag equiped with insulated tools in accordance with the list:

47.	1			
01.	1	universal pliers 180 mm		7101180
02.	1	telephone pliers straight	205 mm	7106205
03.	1	one-hand cable cutter up to 50 mm²		7109240
04.	1	reversible ratchet 1/2"		7308250
05.	1	T-wrench 1/2"		7308250
06.	1	extension 1/2"	250 mm	7306250
07.	1	male si-sided socked 1/2"	SW 4	7305040
08.	1	dto.	SW 5	7305050
09.	1	dto.	SW 6	7305060
10.	1	dto.	SW 8	7305080
11.	1	cable knife		7124180
12.	1	plastic hammer		7130050
13.	1	sloted screwdriver	3,5x100 mm	7201035
14.	1	dto.	5,5x125 mm	7201055
15.	1	cross-sloted screwdriver	size 1	7202001
16.	1	dto.	size 2	7202002
17.	1	male six-sided screwdriver w. angle	SW 4	7210040
18.	1	dto.	SW 5	7210050
19.	1	dto.	SW 6	7210060
20.	1	dto.	SW 8	7210080
21.	1	open ended spanner	SW 10	7301100
22.	1	dto.	SW 11	7301110
23.	1	dto.	SW 13	7301130
24.	1	dto.	SW 14	7301140
25.	1	dto.	SW 17	7301170
26.	1	dto.	SW 19	7301190
27.	1	dto.	SW 22	7301220
28.	1	ring spanner, bent	SW 10	7302100
29.	1	dto.	SW 13	7302130
30.	1	dto.	SW 17	7302170
31.	1	dto.	SW 19	7302190
32.	1	dto.	SW 22	7302220
33.	1	socket 1/2"	SW 8	7303080
34.	1	dto.	SW 10	7303100
35.	1	dto.	SW 13	7303130
36.	1	dto.	SW 17	7303170
37.	1	dto.	SW 19	7303190
38.	1	dto.	SW 22	7303220
39.	1	flat brush, bent	35x380 mm	7401010
40.	2	warning signs "Arbeiten unter Spannung"		7427000
41.	1	spread wedge oval	200x30x11 mm	7420000
42.	1	spread wedge with groove	220x20x28 mm	7419000
43.	10	insulation attachment, conical	6x60 mm	7426007
44.	10	dto.	12x90 mm	7426012
45.	8	Insulation attachment, round	15x110 mm	7410015
46.	8	dto.	20x110 mm	7410020
47.	1	case for insulation attachments		7412000
48.	5	plastic clip	80 mm	7117080
49.	5	dto.	150 mm	7117150
50.	1	leather tool bag without contents	460x370x230 mm	7506100

description	size	weigth	Article	euro
tool bag	460 x 370 x 230 mm	9,7 kg	7503600	960,95

tool bag - live worker 3/8"

- tool bag equiped with insulated tools in accordance with the list:

01.	1	universal pliers, GFK	200 mm	7116203
02.	1	flat-nosed pliers, GFK	190 mm	7116201
03.	1	one-hand cable cutter up to 50 mm²		7109240
04.	1	power side cutter	180 mm	7105180
05.	1	sloted screwdriver	3,5x100 mm	7201035
06.	1	dto.	4,0x100 mm	7201040
07.	1	dto.	5,5x125 mm	7201055
08.	1	dto.	6,5x150 mm	7201065
09.	1	cross-sloted screwdriver	size 1	7202001
10.	1	dto.	size 2	7202002
11.	1	female hex key driver	SW 8	7204080
12.	1	dto.	SW 10	7204100
13.	1	open ended spanner	SW 8	7301080
14.	1	dto.	SW 10	7301100
15.	1	dto.	SW 12	7301120
16.	1	dto.	SW 13	7301130
17.	1	dto.	SW 14	7301140
18.	1	dto.	SW 16	7301160
19.	1	dto.	SW 17	7301170
20.	1	dto.	SW 18	7301180
21.	1	dto.	SW 19	7301190
22.	1	ring spanner, bent	SW 10	7302100
23.	1	dto.	SW 13	7302130
24.	1	dto.	SW 17	7302170
25.	1	dto.	SW 19	7302190
26.	1	dto.	SW 22	7302220
27.	1	cable knife partly insulated blade		7127180
28.	1	defining-knife		7126160
29.	1	dismantling/stripping knife		7125160
30.	1	male six-sided screwdriver w. angle	SW 4	7210040
31.	1	dto.	SW 5	7210050
32.	1	dto.	SW 6	7210060
33.	1	dto.	SW 8	7210080
34.	1	spread wedge with groove	220x20x28 mm	7419000
35.	1	spread wedge oval	200x30x11 mm	7420000
36.	1	plastic hammer		7130050
37.	1	flat brush, croped		7401000
38.	2	warning signs "Arbeiten unter Spannung"		7427000
39.	10	inslation attachment, conical	6x60 mm	7426007
40.	10	dto.	12x90 mm	7426012
41.	8	self-clipping insulation attachment	10 mm	7409001
42.	8	dto.	20 mm	7409002
43.	1	case for insulation attachments		7412000
44.	5	plastic clip	80 mm	7117080
45.	5	dito.	150 mm	7117150
46.	1	leather-tool bag without contents	460x370x230 mm	7506100
47.	1	reversible ratchet 3/8"		7308251
48.	1	T-wrench 3/8"		7322160
49.	1	extension 3/8"	125 mm	7321125
50.	1	dto.	250 mm	7321250
51.	1	male six-sided socket	SW 4	7324040
52.	1	dto.	SW 5	7324050
53.	1	dto.	SW 6	7324060
54.	1	dto.	SW 8	7324080
55.	1	socket 3/8"	SW 8	7319080
56.	1	dto.	SW 10	7319100
57.	1	dto.	SW 13	7319130
58.	1	dto.	SW 17	7319170
59.	1	dto.	SW 19	7319190
60.	1	dto.	SW 22	7319220
61.	1	dto.	SW 24	7319240
62.	1	plastic carrying case, empty		7509020

description	size	weigth	Article	euro
tool bag	460 x 370 x 230 mm	10,6 kg	7503200	1213,11

tool bag - live worker 1/2"

- tool bag equiped with insulated tools in accordance with the list:

01.	1	universal pliers GFK	200 mm	7116203
02.	1	flat-nosed pliers GFK	190 mm	7116201
03.	1	one-hand cable cutter up to 50 mm²		7109240
04.	1	power side cutter	180 mm	7105180
05.	1	sloted screwdriver	3,5x100 mm	7201035
06.	1	dto.	4,0x100 mm	7201040
07.	1	dto.	5,5x125 mm	7201055
08.	1	dto.	6,5x150 mm	7201065
09.	1	cross-sloted screwdriver	size 1	7202001
10.	1	dto.	size 2	7202002
11.	1	female hex key driver	SW 8	7204080
12.	1	dto.	SW 10	7204100
13.	1	open ended spanner	SW 8	7301080
14.	1	dto.	SW 10	7301100
15.	1	dto.	SW 12	7301120
16.	1	dto.	SW 13	7301130
17.	1	dto.	SW 14	7301140
18.	1	dto.	SW 16	7301160
19.	1	dto.	SW 17	7301170
20.	1	dto.	SW 18	7301180
21.	1	dto.	SW 19	7301190
22.	1	ring spanner, bent	SW 10	7302100
23.	1	dto.	SW 13	7302130
24.	1	dto.	SW 17	7302170
25.	1	dto.	SW 19	7302190
26.	1	dto.	SW 22	7302220
27.	1	cable knife partly insulated blade		7127180
28.	1	defining-knife		7126160
29.	1	dismantling/stripping knife		7125160
30.	1	male six-sided screwdriver w. angle	SW 4	7210040
31.	1	dto.	SW 5	7210050
32.	1	dto.	SW 6	7210060
33.	1	dto.	SW 8	7210080
34.	1	spread wedge with groove	220x20x28 mm	7419000
35	1	spread wedge	200x30x11	7420000
36.	1	plastic hammer		7130050
37.	1	flat brush, croped	1,5"	7401000
38.	2	warning signs "Arbeiten unter Spannung"		7427000
39.	10	insulation attachment, conical	6x60 mm	7426007
40.	10	dto.	12x90 mm	7426012
41.	8	self-clipping insulation attachment	10 mm	7409001
42.	8	dto.	20 mm	7409002
43.	1	case for insulation attachments		7412000
44.	5	plastic clip	80 mm	7117080
45.	5	dto.	150 mm	7117150
46.	1	leather-tool bag without contents	460x370x230 mm	7506100
47.	1	reversible ratchet 1/2"		7308250
48.	1	T-wrench		7311160
49.	1	extension 1/2"	125 mm	7306125
50.	1	dto.	250 mm	7306250
51.	1	male six-sided socket	SW 4	7305040
52.	1	dto.	SW 5	7305050
53.	1	dto.	SW 6	7305060
54.	1	dto.	SW 8	7305080
55.	1	socket	SW 8	7303080
56.	1	dto.	SW 10	7303100
57.	1	dto.	SW 13	7303130
58.	1	dto.	SW 17	7303170
59.	1	dto.	SW 19	7303190
60.	1	dto.	SW 22	7303220
61.	1	dto.	SW 24	7303240
62.	1	plastic carrying case, empty		7509010

description	size	weigth	Article	euro
tool bag	460 x370 x230 mm	11,2 kg	7503300	1215,32

tool bag counter, small

- tool bag equiped with insulated tools in accordance with the list:

01.	1	leather-tool bag	270x305x170 mm	7506022
02.	1	universal pliers	180 mm	7101180
03.	1	side cutter	180 mm	7104160
04.	1	round pliers	160 mm	7103160
05.	1	telephone pliers, bended checks	205 mm	7107205
06.	1	sloted screwdriver	2,5x75 mm	7201025
07.	1	dto.	4,0x100 mm	7201040
08.	1	dto.	5,5x125 mm	7201055
09.	1	dto.	8,0x175 mm	7201080
10.	1	cross-sloted screwdriver	size 1	7202001
11.	1	dto.	size 2	7202002
12.	1	male hex key, T-handel	SW 8	7206080
13.	1	cable knife with changeable blade		7141200
14.	1	one hand cable cutter	165 mm	7109171
15.	1	insulating protective glove class 0	size 10	7421010
16.	1	under glove		7437000
17.	1	voltage detector		9003024
18.	1	flat brush, straight	1"	7401201
19.	1	case for insulation attachments		7412000
20.	10	insulation attachment, round	7x50 mm	7411005
21.	10	insulation attachment, conical	6x40 mm	7426006
22.	10	dto.	6x60 mm	7426007
23.	10	dto.	10x80 mm	7426010
24.	1	warning sign "Arbeiten unter Spannung		7427000
25.	1	screw holder	3 mm	7212030
26.	1	wing nut key, not insulated		7213000

description	size	weigth	Article	euro
tool bag	270 x 305 x 170 mm	4,3 kg	7503400	459,43

tool bag counter

- tool bag equiped with insulated tools in accordance with the list:

01.	1	universal pliers	180 mm	7101180
02.	1	tweezers, straight		7121150
03.	1	tweezers, curved		7121151
04.	1	one time open ended spanner	SW 8	7301080
05.	1	dto.	SW 10	7301100
06.	1	round pliers	160 mm, short jaws	7103160
07.	1	stripping pliers	150 mm	7108150
08.	1	Duspol "analog"		9003024
09.	1	assembly pliers	240 mm	7111240
10.	1	telephone pliers	205 mm, straight	7106205
11.	1	wrench	SW 5,5	7204055
12.	1	dto.	SW 7,0	7204070
13.	1	dto.	SW 8,0	7204080
14.	1	dto.	SW 10,0	7204100
15.	1	screwdriver	0,4x2,5x75 mm	7201025
16.	1	dto.	0,5x3,0x100 mm	7201030
17.	1	dto.	0,5x3,5x100 mm	7201035
18.	1	dto.	0,5x3,0x100 mm	7201030
19.	1	dto.	1,0x5,5x125 mm	7201055
20.	1	dto.	1,2x6,5x150 mm	7201065
21.	1	cross sloted screwdriver	PH 0	7202000
22.	1	dto.	PH 1	7202001
23.	1	dto.	PH 2	7202002
24.	25	insulation attachment	6x60 mm	7426007
25.	25	dto.	10x60 mm	7426010
26.	25	dto.	5x40 mm	7411005
27.	25	dto.	7x50 mm	7411007
28.	1	container for insul. attachments		7412000
29.	1	tool bag without contents		7506021

description	size	weigth	Article	euro
tool bag	480 x 320 170 mm	9,3 kg	7502000	518,98

tool bag MSR-technology equipment

- tool bag equiped with insulated tools in accordance with the list:

01.	1	universal pliers 180 mm		7101180
02.	1	side cutter 160 mm		7104160
03.	1	round pliers 160 mm, short jaws		7103160
04.	1	telephone pliers 170 mm, straight		7106170
05.	1	telephone pliers 205 mm, curved		7107205
06.	1	sloted screwdriver	0,4x2,5x75 mm	7201025
07.	1	dto.	0,6x3,5x100 mm	7201035
08.	1	dto.	1,0x5,5x125 mm	7201035
09.	1	dto.	1,2x6,5x150 mm	7201065
10.	1	cross solted screwdriver	PH 1	7202001
11.	1	dto.	PH 2	7202002
12.	1	screw holder	3 mm	7212030
13.	1	dto.	6 mm	7212060
14.	1	single open ended spanner	SW 8	7301080
15.	1	dto.	SW 9	7301090
16.	1	dto.	SW 10	7301100
17.	1	dto.	SW 11	7301110
18.	1	dto.	SW 12	7301120
19.	1	dto.	SW 13	7301130
20.	1	dto.	SW 14	7301140
21.	1	six-sided wrench	SW 7	7204070
22.	1	dto.	SW 8	7204080
23.	1	dto.	SW 9	7204090
24.	1	dto.	SW 10	7204100
25.	1	tweezers 150 mm straight		7121150
26.	1	tweezers 150 mm curved		7121151
27.	1	cable knife 50 mm blade		7124180
28.	1	flat brush, straight		7401201
29.	6	plastic clip	80 mm	7117080
30.	20	insulation attachments, conical	6x40 mm	7426006
31.	20	dto.	6x60 mm	7426007
32.	1	container for insul. attachments		7412000
33.	1	tool bag without contents		7506000

description	size	weigth	Article	euro
tool bag	420 x 320 x 230 mm	9,0 kg	7504000	650,93

tool bag overhead line

- tool bag equiped with insulated tools in accordance with the list:

01.	1	universal pliers 205 mm		7101205
02.	1	assembly pliers 240 mm		7111240
03.	1	one hand cable scissors	up to 50 mm	7109240
04.	5	plastic clip	150 mm	7117150
05.	1	cross sloted screwdriver	10/13/14/17	7120151
06.	1	dto.	9/11/12/19	7120150
08.	1	tool bag without contents		7505000

description	size	weigth	Article	euro
tool bag	270 x 300 145 mm	3,0 kg	7517000	286,87

plastic carrying case 3/8" for tool bag

- matched in tool bag life - worker
- equipped with the following tools:

01.	1	reversible ratchet 3/8"		7308251
02.	1	T-wrench 3/8"		7322160
03.	1	extension 3/8"	125 mm	7321125
04.	1	dto.	250 mm	7321250
05.	1	male six-sided socket 3/8"	SW 4	7324040
06.	1	dto.	SW 5	7324050
07.	1	dto.	SW 6	7324060
08.	1	dto.	SW 8	7324080
09.	1	socket 3/8"	SW 8	7319080
10.	1	dto.	SW 10	7319100
11.	1	dto.	SW 11	7319110
12.	1	dto.	SW 13	7319130
13.	1	dto.	SW 14	7319140
14.	1	dto.	SW 16	7319160
15.	1	dto.	SW 17	7319170
16.	1	dto.	SW 18	7319180
17.	1	dto.	SW 19	7319190
18.	1	dto.	SW 22	7319220
19.	1	dto.	SW 24	7319240
20.	1	platic carrying case, empty		7509020

description	parts	weigth	Article	euro
plastic carrying case	19-teilig	3,6 kg	7524100	411,93

plastic carrying case cable-assembly 3/8"

- carrying case equipped with insulated tools in accordance with the list:

01.	1	reversible ratchet 3/8"		7308251
02.	1	extension 125 mm 3/8"		7321125
03.	1	extension 250 mm 3/8"		7321250
04.	1	kinder hammer, recoil free		7122200
05.	1	spread wedge, plastic		7418160
06.	1	angle screwdriver	SW 5	7210050
07.	1	angle screwdriver	SW 6	7210060
08.	1	socket 3/8"	SW 13	7319130
09.	1	dto.	SW 17	7319170
10.	1	dto.	SW 19	7319190
11.	1	six-sided male wrench	SW 5	7324050
12.	1	dto.	SW 6	7324060
13.	1	dto.	SW 8	7324080
14.	1	dto.	SW 10	7324100
15.	1	six-sided male wrench	SW 5	7334
16.	1	sloted screwdriver	3,5x100 mm	7201035
17.	1	plastic case without contents		

description	parts	weigth	Article	euro
plastic carrying case	16	3,4 kg	7524000	279,51

plastic carrying case with foam m insert 3/8", 17 pieces

- carrying case equipped with insulated tools in accordance with the list:

01.	1	reversible ratchet 3/8"		7308251
02.	1	extension 125 mm 3/8"		7321125
03.	1	extension 250 mm 3/8"		7321250
04.	1	T- wrench 3/8"		7322160
05.	1	socket 3/8"	SW 10	7319100
06.	1	dto.	SW 11	7319110
07.	1	dto.	SW 12	7319120
08.	1	dto.	SW 13	7319130
09.	1	dto.	SW 14	7319140
10.	1	dto.	SW 17	7319170
11.	1	dto.	SW 19	7319190
12.	1	dto.	SW 22	7319220
13.	1	six-sided male wrench	SW 5	7324050
14.	1	dto.	SW 6	7324060
15.	1	dto.	SW 8	7324080
16.	1	trouqe limiter 3/8"	you can choose bt. 12-25 Nm	
17.	1	sloted screwdriver	3,5x100 mm	7201035
18.	1	plastic case without contents		

description	parts	weigth	Article	euro
plastic carrying case	17	4,0 kg	7522000	339,34

plastic carrying case 1/2" for tool bag

- matched in tool bag life - worker
- equipped with the following tools:

01.	1	reversible ratchet 1/2"		7308250
02.	1	T-wrench 1/2"		7311160
03.	1	extension 1/2"	125 mm	7306125
04.	1	dto.	250 mm	7306250
05.	1	male six-sided socket 1/2"	SW 4	7305040
06.	1	dto.	SW 5	7305050
07.	1	dto.	SW 6	7305060
08.	1	dto.	SW 8	7305080
09.	1	socket	SW 8	7303080
10.	1	dto.	SW 10	7303100
11.	1	dto.	SW 11	7303110
12.	1	dto.	SW 13	7303130
13.	1	dto.	SW 14	7303140
14.	1	dto.	SW 16	7303160
15.	1	dto.	SW 17	7303170
16.	1	dto.	SW 18	7303180
17.	1	dto.	SW 19	7303190
18.	1	dto.	SW 22	7303220
19.	1	dto.	SW 24	7303240
20.	1	dto.	SW 27	7303270
21.	1	plasitc carrying case, empty		7509010

description	parts	weigth	Article	euro
plastic carrying case	20-teilig	4,2 kg	7524200	424,34

plastic carrying case w. foam material insert 1/2", 16pieces

- carrying case equipped with insulated tools in accordance with the list:

01.	1	reversible ratchet 1/2"		7308250
02.	1	extension 125 mm 1/2"		7306125
03.	1	extension 250 mm 1/2"		7306250
04.	1	T- wrench 1/2"		7311160
05.	1	socket 1/2"	SW 10	7303100
06.	1	dto.	SW 12	7303120
07.	1	dto.	SW 13	7303130
08.	1	dto.	SW 14	7303140
09.	1	dto.	SW 17	7303170
10.	1	dto.	SW 19	7303190
11.	1	dto.	SW 22	7303220
12.	1	dto.	SW 24	7303240
13.	1	six-sided male wrench	SW 5	7305050
14.	1	dto.	SW 6	7305060
15.	1	dto.	SW 8	7305080
16.	1	sloted screwdriver	3,5x100 mm	7201035
17.	1	plastic case without contents		

description	parts	weigth	Article	euro
Kunststoffkoffer	16	4,5 kg	7523000	267,16

plastic carrying case foam material insert 1/2", 26 pieces

- carrying case equipped with insulated tools in accordance with the list:

01.	1	universal pliers 205 mm		7101205
02.	1	side cutter 160 mm		7104160
03.	1	telephone pliers 205 mm, straight		7106205
04.	1	reversible ratchet 1/2"		7308250
05.	1	extension 250 mm 1/2"		7306250
06.	1	stripping knife		7125160
07.	1	cable knife		7124180
08.	1	socket 1/2"	SW 10	7303100
09.	1	dto.	SW 11	7303110
10.	1	dto.	SW 12	7303120
11.	1	dto.	SW 13	7303130
12.	1	dto.	SW 14	7303140
13.	1	dto.	SW 17	7303170
14.	1	dto.	SW 19	7303190
15.	1	single ring wrench	SW 10	7302100
16.	1	dto.	SW 11	7302110
17.	1	dto.	SW 12	7302120
18.	1	dto.	SW 13	7302130
19.	1	dto.	SW 14	7302140
20.	1	dto.	SW 17	7302170
21.	1	dto.	SW 19	7302190
22.	1	voltage detector		
23.	1	sloted screwdriver	3,5x100	7201035
24.	1	dto.	5,5x125	7201055
25.	1	dto.	6,5x150	7201060
26.	1	dto.	8,0x175	7201080
27.	1	plastic case without contents		

description	parts	weigth	Article	euro
plastic carrying case	26	5,0 kg	7521000	322,63

cleaning set BSD for live working without mirror

- without isulated mirror
- "dry cleaning" (suction)
- supplied in a transport case

With the ckeaning set, low voltage systems such as cable distribution cabinets, inddor distribution systems or control systems can be cleaned while energised without complications.
Indivdual parts can also be supplied.

01.	case		7481000
02.	vacuum tube with handle	380 mm	7481380
03.	extension	200 mm	7481200
04.	extension	300 mm	7481300
05.	extension	400 mm	7481400
06.	tube angle	45°	7481001
07.	tube angle	90°	7481006
08.	tubular brush, cylindr.	80 mm	7481011
09.	tubular brush, con.	80 mm	7481012
10.	adapter	40/25 mm	7481013
11.	nozzle	35 mm	7481004
12.	nozzle	55 mm	7481002
13.	nozzle sloping	35 mm	7481005
14.	nozzle with brush	25 mm	7481010
15.	cleaning brush	40 mm	7481017
16.	cleaning brush	25 mm	7481016
17.	vacuum hose adapter		7481003

1000 V

description	size	weigth	Article	euro
cleaning set	550 x 500 x 180 mm	6,5 kg	7480009	1265,00

cleaning set BSD for live working

- cleaning by vacuum up to 1000 V
- to use also for wet cleaning
- supplied in a transport case

With the ckeaning set, low voltage systems such as cable distribution cabinets, inddor distribution systems or control systems can be cleaned while energised without complications.
Indivdual parts can also be supplied.

01.	case		7481000
02.	vacuum tube with handle	380 mm	7481380
03.	extension	200 mm	7481200
04.	extension	300 mm	7481300
05.	extension	400 mm	7481400
06.	tube angle	45°	7481001
07.	tube angle	90°	7481006
08.	tubular brush, cylindr.	80 mm	7481011
09.	tubular brush, con.	80 mm	7481012
10.	adapter	40/25 mm	7481013
11.	nozzle	35 mm	7481004
12.	nozzle	55 mm	7481002
13.	nozzle sloping	35 mm	7481005
14.	nozzle with brush	25 mm	7481010
15.	cleaning brush	40 mm	7481017
16.	cleaning brush	25 mm	7481016
17.	isulated mirror	90 mm	7481077
18.	vacuum hose adapter		7481003

1000 V

description	size	weigth	Article	euro
cleaning set	550 x 500 x 180 mm	6,8 kg	7480010	1562,75

case, low voltage cleaning set

- for carrying and in accordance with the storage of the equipment pieces of the low voltage cleaning set
- synthetic material, without contents

description	size	weigth	Article	euro
case	550 x 500 x 180 mm	4,8 kg	7481000	334,15

vacuum tube with tangible evidence, low v. clean. set

- as operating tube with tangible evidence and handguard
- with bottom and top connecting unit

1000 V

description	lenght	weigth	Article	euro
vacuum tube with tangible evidence	380 mm	240 g	7481380	47,90

extension 1kV

- isolation tube ø 40 mm, with under and upper connecting unit

1000 V

description	lenght	weigth	Article	euro
extension V2	200 mm	160 g	7481200	15,80
extension V3	300 mm	220 g	7481300	24,60
extension V4	400 mm	240 g	7481400	26,75

vacuum hose adapter, low voltage cleaning set

- for sticking onto the tube extension
- bent revolving 120°, with vacuum air regulation
- suitable for vaccum hoses ø 35 mm

description	size	weigth	Article	euro
adapter	180 mm	180g	7481003	136,50

vacuum tube angle 40°, low voltage cleaning set

- 45° bent
- 40 mm diameter

1000 V

description	size	weigth	Article	euro
angle 45°	40 mm	110 g	7481001	32,30

vacuum tube angle 90° , low voltage cleaning set

- 45° bent
- 40 mm diameter

1000 V

description	size	weigth	Article	euro
angle 90°	40 mm	110 g	7481006	32,30

tubular brush, low voltage cleaning set

- ø 25 mm tube diameter
- without brush head
- cylindrical bristles

1000 V

description	diameter	weigth	Article	euro
	80 mm	100 g	7481100	122,80

tubular brush, low voltage cleaning set

- ø 25 mm tube diameter
- cylindrical bristles

1000 V

description	diameter	weigth	Article	euro
Stabbürste 1	80 mm	110 g	7481011	136,50

tubular brush 2, low voltage cleaning set

- ø 25 mm tube diameter
- without brush head
- conical bristles

1000 V

description	diameter	weigth	Article	euro
	80 mm	100 g	7481150	124,30

tubular brush 2, low voltage cleaning set

- ø 25 mm tube diameter
- conical bristles

1000 V

description	diameter	weigth	Article	euro
tubular brush 2	80 mm	90 g	7481012	138,50

adapter D, for small tubular tubes low v. cleaning

- ø 20 mm tube diameter
- reduces from 40 mm vaccum tube to 20 mm tube for bristles
- for bristles and nozzles

1000 V

description	size	weigth	Article	euro
adapter D	40 mm	70 g	7481013	41,85

cleaning brush, low voltage cleaning set

- for set-pieces
- ø 20 mm tube diameter - Art-Nr. 7 481 016
- ø 40 mm tube diameter - Art-Nr. 7 481 017
- not authorized for training/education under voltage!!

description	diameter	weigth	Article	euro
cleaning brush	20 mm	30 g	7481016	52,00
cleaning brush	40 mm	50 g	7481017	52,00

flat nozzle 35 mm, low voltage cleaning set

- ø 25 mm
- for cleaning of smooth surfaces , for example floors, walls or similar

1000 V

description	size	weigth	Article	euro
flat nozzle 35	35 mm	50 g	7481004	32,10

flat nozzle sloping, low voltage cleaning set

- nozzle opening 60°, nozzle width 35 mm
- sloping

1000 V

description	size	weigth	Article	euro
flat nozzle 35	35 mm	40 g	7481005	37,20

round nozzle with brush, low voltage cleaning set

- ø 25 mm tube diameter

1000 V

description	diameter	weigth	Article	euro
round nozzle	25 mm	50 g	7481010	88,25

flat nozzle 55 mm, low voltage cleaning set

- nozzle width: 55 mm, length: 200 mm
- ø 40 mm
- for cleaning of smooth surfaces for example floors, walls or similar

1000 V

description	size	weigth	Article	euro
flat nozzle 55	55 mm	110 g	7481002	36,30

isulated mirror for low voltage cleaning set

- isolating mirror glas
- for checking hidden components
- connectable with suction pipes and extensions
- for low voltage systems

1000 V

description	size	weigth	Article	euro
mirror	90 mm	205 g	7481077	298,80

general-purpose vacuum cleaner GAS 25

- for vacuuming up and drawing off of all dusts and not health-endangering materials
- filter volume of 25 l
- with electrical outlet and remote controlled automatic for electric power tools
- for wet- and dry vacuum
- max. air flow: 57 l/s
- max. vacuum: 230 mbar
- machine weight: 10 kg

description	performence	weigth	Article	euro
general-purpose vacuum cleaner	1200 W	11 kg	7450050	478,33

general-purpose vacuum cleaner GAS 50

- for vacuuming up and drawing off of all dusts and not health-endangering materials
- filter volume of 50 l for addmission of high dust amounts
- with electrical outlet and remote controlled automatic for electric power tools
- for wet- and dry vacuuming
- max. air flow: 57 l/s
- max. vacuum: 230 mbar
- machine weight: 10 kg

description	performence	weigth	Article	euro
general-purpose vacuum cleaner	1200 W	15 kg	7450030	672,37

other

metal saw blent 250 mm

- EN 60900
- PVC-dip-isolated, shock-resistant
- saw bladet chrome-vanadium-steel, not insulated, brunished

1000 V

description	size	weigth	Article	euro
metal saw bent	250 mm	215 g	7313250	30,14
replacement saw blade	150 mm	5 g	1182150	0,24

metal frame saw 450 mm

- EN 60900
- PVC-dip-isolated, shock-resistant
- blade chrom-vanadium-steel, not insulated
- with screw of synthetic material for inserting a blade

1000 V

description	size	weigth	Article	euro
metal frame saw	450 mm	300 g	7336450	36,50
replacement saw blade	300 mm	10 g	1181300	1,04

metal saw bent 520 mm

- EN 60900
- PVC-dip-isolated, shock-resistant
- blade chrom-vanadium-steel, not insulated
- with screw of synthetic material for inserting a blade

1000 V

description	size	weigth	Article	euro
metal saw bent	520 mm	1070 g	7313520	35,64
replacement saw blade	300 mm	10 g	1181300	1,04

cable mantle saw

- for sawing up the mantle of a cable with adjustable stop
- changeable saw blades
- squirting insulation, shock-resistant

1000 V

description	size	weigth	Article	euro
cable mantle saw	250 mm	140 g	7314250	46,20
replacement saw blade	120 mm	6 g	7314120	3,32

holder for screw connectors

- EN 60900
- out of high alloyed steel, forged
- PVC-dip-isolated, shock-resistant

1000 V

description	size	weigth	Article	euro
holder for screw connectors	18 mm	215 g	7315002	23,67
holder for screw connectors	28 mm	310 g	7315000	27,53
holder for screw connectors	40 mm	440 g	7315001	30,06

holder screw connectors, adjustable

- EN 60900
- PVC-dip-isolated, shock-resistant
- for screw connectors up to 40 mm, adjustable
- also for street lighting useable

1000 V

description	size	weigth	Article	euro
holder screw connectors	15 - 42 mm	430 g	7315500	42,27

tweezers

- out of spring steel, chrome-plated
- handle surface contoured
- PVC-dip-isolated according EN 60900

1000 V

description	size	weigth	Article	euro
tweezers	gerade	55 g	7121150	9,82
tweezers	gebogen	55 g	7121151	10,58

search mirror

- EN 60900
- PVC-dip-isolated, shock-resistant

1000 V

description	diameter	weigth	Article	euro
search mirror	22 mm	20 g	7343022	14,45

scraper insulated for low voltage

- for making shiny and removing of metalic poluted layers of areas (fuel knife, bus bar, NH-protection contacts)
- blade PVC, squirt-insulated with anti-slipping-protection
- handle with force form hilt
- working head out of hard metal, width 25 mm
- EN 60900

1000 V

description	size	weigth	Article	euro
scraper	25 mm	200 g	7427005	70,93

flat brush

- natural bristols

1000 V

description	size	weigth	Article	euro
Flachpinsel, gerade	1"	20 g	7401201	4,65
flat brush, croped	1"	70 g	7401010	7,75
flat brush, croped	1,5"	75 g	7401000	8,01
flat brush, croped	2"	80 g	7401020	9,35

punch

- EN 60900
- with diagonal handle
- for of cable for measure purposes

1000 V

description	diameter	weigth	Article	euro
punch	4 mm	120 g	7342004	20,31

cable cleaning brush insulated for low voltage

- with insulated handle
- for cleaning of Cu- and. Al- over head lines up to 150 mm²
- PVC-dip-isolated, shock-resistant, with anti slipping protection
- cable cleaning brush in 5 and 15 cm length available
- according EN 60900

1000 V

description	lenght	weigth	Article	euro
cable cleaning brush Al	5 cm	210 g	7427001	55,76
cable cleaning brush Al	15 cm	260 g	7427002	81,48
cable cleaning brush Cu	5 cm	210 g	7427003	55,76
cable cleaning brush Cu	15 cm	260 g	7427004	81,48

inch rule sythetic material

- inch rule out of white plastic, length 1m

description	lenght	weigth	Article	euro
inch rule	1,0 m		7343100	5,34

snake bar drill

- EN 60900
- for drilling of insulators
- PVC-dip-isolated, shock-resistant
- T-handle
- length 300 mm

1000 V

description	size	weigth	Article	euro
snake bar drill	16 mm	840 g	7318016	49,20
snake bar drill	18 mm	870 g	7318018	50,20
snake bar drill	20 mm	900 g	7318020	54,30
snake bar drill	22 mm	980 g	7318022	58,10

turn bar

- EN 60900
- PVC-dip-isolated, shock-resistant
- for screwing of insulators in and out of wooden poles

1000 V

description	size	weigth	Article	euro
turn bar	29 x 12 cm	315 g	7484000	29,02

insulating block stopper

- according to BGV 125 and DIN 40008
- insulating stoppers for screw fuse (elements) E 14, 27, 33
- for indoor systems
- E 14 ø 20 mm, length 40 mm
- E 27, 33 ø 45 mm, length 55 mm

description	size	weigth	Article	euro
insulating block stopper	E 14	15 g	7425100	9,85
insulating block stopper	E 27, 33	15 g	7425101	11,99

warning sign, work under voltage

- out of PVC
- with the inscription: "Arbeiten unter Spannung / Nichts verändern!"(work under voltage/don't change anything)
- triangular shape

description	size	weigth	Article	euro
warning sign	200 x 200 x 200 mm	20 g	7427000	3,68

industry - blocking cap

- protection installation against restart (VDE 0105)
- conspicuous red top with the inscription "In Arbeit - gesperrt"(In work - closed off)
- will be fixed with special keys

description	thread	Article	euro
industry - blocking cap	D II f. Gew. E27	8148002	34,15
industry - blocking cap	D III f. Gew. E33	8148003	43,22

special keys for blocking cap

description	size	weigth	Article	euro
special keys for blocking cap		50 g	8149000	14,33

reconciliation cabel for cable out of metal

- for reconciliation of cable with mantles out of metal up to a diameter of 8 - 80 mm
- unsuitable for work under voltage!

description	size	weigth	Article	euro
reconciliation cabel	2,5 m	1,0 kg	7516001	218,70

insulating protective gloves class 00

- out of 0,5 mm thick natural rubber
- class 00
- up to 500 V AC or rather 750 V DC
- EN 60903
- incl. undergloves

description	size	weigth	Article	euro
latex-protective gloves	8	115 g	7434008	19,46
latex-protective gloves	9	115 g	7434009	19,46
latex-protective gloves	10	115 g	7434010	19,46
latex-protective gloves	11	115 g	7434011	19,46

insulating protective gloves class 0

- out of 1,0 mm thick natural rubber
- class 0
- up to 1000 V AC or rather 1500 V DC
- other protective classes (1, 2 and 3) on request
- EN 60903
- incl. undergloves

description	size	weigth	Article	euro
latex-protective gloves	8	250 g	7421008	22,22
latex-protective gloves	9	250 g	7421009	22,22
latex-protective gloves	10	250 g	7421010	22,22
latex-protective gloves	11	250 g	7421011	22,22

insulating protective gloves class 0

- out of 1,0 mm thick EPDM
- therefore very stabil and tearproof
- colour blue
- with rolled edge which prevents a sliding down of the glove
- class 0
- up to 1000 V AC or rather 1500 V DC
- EN 60903
- incl. undergloves

description	size	weigth	Article	euro
EPDM-glove	8		7421108	on request
EPDM-glove	9		7421109	on request
EPDM-glove	10		7421110	on request
EPDM-glove	11		7421111	on request

insulating protective gloves multi-film class 00

- out of 0,5 mm thick natural rubber
- polychloropren-coating
- class 00
- up to 500 V AC or rather 750 V DC
- EN 60903

description	size	weigth	Article	euro
protective gloves multi-film	8	240 g	7435008	38,80
protective gloves multi-film	9	240 g	7435009	38,80
protective gloves multi-film	10	240 g	7435010	38,80
protective gloves multi-film	11	240 g	7435011	38,80

insulating protective gloves multi-film class 00

- out of 1,0 mm thick natural rubber
- polychloropren-coating
- class 00
- up to 1000 V AC or rather 1500 V DC
- EN 60903

Klasse 0

description	size	weigth	Article	euro
protective gloves multi-film	8	270 g	7436008	43,90
protective gloves multi-film	9	270 g	7436009	43,90
protective gloves multi-film	10	270 g	7436010	43,90
protective gloves multi-film	11	270 g	7436011	43,90

anti sweat safety gel

- is an alcoholic gel
- has a skin protective, skin caring and anti microbe qualtity
- astringent effect by the high part of Hamamelis extract
- because of this consolidation of the hard skin and therefore protection against skin softening
- skin caring effect through humidity complex made of panthenol and glycerine
- works anti bacterial by the alcohol content
- to apply to the hands before use of the work-under-voltage-gloves, causes a much lower sweat production
- avialable in 100-ml-bottle with one hand top

description	size	weigth	Article	euro
anti sweat safety gel	100 ml	110 g	7436000	6,33

undergloves

- out of 100% cotton
- size 10

description	size	weigth	Article	euro
undergloves	10	50 g	7437010	2,19

pneumatic glove tester

- for testing of synthetic gloves of air holes in the demanded norm
- by pushing the button the glove will be pumped up

description	size	weigth	Article	euro
pneumatic glove tester	universal	800 g	7352000	149,00

storage bag for gloves, class 00 and 0

- suitable for all work-under-voltage-gloves

description	size	weigth	Article	euro
storage bag	400 x 150 mm	140 g	7518000	12,98

storage- belt bag gloves cl 00 a.0

- for storing of gloves
- with belt loop
- out of red synthetic leather

description	size	weigth	Article	euro
belt bag	200 x 180 mm	130 g	7518001	15,00

electrican helmet

- helmet skin out of glass-fibre-strength polycarbonat
- straight helmet skin with rain-channel
- extreme side- stiffness
- 6-point-helmet with a naturally leather sweat ribbon and a foam strip
- avialable in the colours yellow, white and red
- according to EN 397
- 440 V AC
- DIN EN 50365
- stretcher duration 10 years
- use in hot areas

description	size	weigth	Article	euro
electrican helmet / yellow	universal	440 g	7403000	18,73
electrican helmet / white	universal	440 g	7403001	18,73
electrican helmet / red	universal	440 g	7403002	18,73

chin-strap

- fitting to electrican helmet 7 403 000, -001, -002
- out of textile band with confortable quick clasp

description	size	weigth	Article	euro
chin-strap	universal	40 g	7490000	5,95

chin-strap

- fitting to electrican helmet 7 403 000, -001, -002
- with confortable jerk twitch quick fastening

description	size	weigth	Article	euro
chin-strap	universal	30 g	7491000	5,80

electrican face protection

- highly transparent, mist free
- glass thickness 1,5 mm, acetat
- for helmets 7 438 001 - 003
  7 403 000 - 002
- for attaching to the electrican helmet
- EN 166

1000 V

description	size	weigth	Article	euro
electrican face protection	universal	365 g	7403500	32,69

electrican face protection

- glass with polished edge
- out of acetat
- with fixing profil out of clear synthetic material and elastic
- for helmets 7 438 001 - 003
  7 403 000 - 002

1000 V

description	size	weigth	Article	euro
electrican face protection	universal	360 g	7439000	51,20

electrican face protection with putting in device

- highly transparent, mist free
- glass thickness 1,5 mm, acetat
- for helmets 7 438 001 - 003
- for attaching to the electrican helmet
- EN 166

1000 V

description	size	weigth	Article	euro
electrican face protection	universal	250 g	7485000	48,71

helmet storage bag

- bag out of PE-coated material
- for admission of for example helmet, face protection, gloves etc.
- with zip
- colour: orange
- without contents

description	size	weigth	Article	euro
helmet storage bag	400 x 300 mm	350 g	7507500	23,55

electrican boots

- EN 50321 up to 1000 V
- with protection cap in the toes section

! unsuitable for climbing with climbing iron !

Klasse 0

description	size	weigth	Article	euro
electrican boots	40	3000 g	7800040	68,72
electrican boots	41	3000 g	7800041	68,72
electrican boots	42	3000 g	7800042	68,72
electrican boots	43	3000 g	7800043	68,72
electrican boots	44	3000 g	7800044	68,72
electrican boots	45	3000 g	7800045	68,72
electrican boots	46	3000 g	7800046	68,72
electrican boots	47	3000 g	7800047	68,72

special - protection suit "Power Protec", insulated

- according to ENV 50286, besides to ENV 50254
  CLASS 2 (7 kA 0,5 sec.) CERTIFICATED
- low carrying weight by new developed Gore-Tex-Membran by highest possible breathability
- water resistance will be guaranteed by a special vacuum locking system
- large, well cut cape with cord width adjusting
- sleeve- and waistband adjusting by means of Velcor/fleece-system
- no parts of metal on the whole suit
- washable up to 60 °C and chemical cleaning resistant
- up to 500 V AC and 750 V DC
- storage bag blue for storing of the work under voltage- overhead line suits, with Velcor-fastening

Klasse 00

description	size	weigth	Article	euro
jacket blue	S (44/46)	1100 g	7422046	452,58
jacket blue	M (48/50)	1200 g	7422050	452,58
jacket blue	L (52/54)	1300 g	7422054	452,58
jacket blue	XL (56/58)	1400 g	7422058	497,84
jacket blue	XXL (60/62)	1500 g	7422062	520,46
trousers blue	S (44/46)	800 g	7422146	276,18
trousers blue	M (48/50)	900 g	7422150	276,18
trousers blue	L (52/54)	1000 g	7422154	276,18
trousers blue	XL (56/58)	1100 g	7422158	303,80
trousers blue	XXL (60/62)	1200 g	7422162	317,60
jacket red	S (44/46)	1100 g	7424046	452,58
jacket red	M (48/50)	1200 g	7424050	452,58
jacket red	L (52/54)	1300 g	7424054	452,58
jacket red	XL (56/58)	1400 g	7424058	497,84
jacket red	XXL (60/62)	1500 g	7424062	520,46
trousers red	S (44/46)	800 g	7424146	276,18
trousers red	M (48/50)	900 g	7424150	276,18
trousers red	L (52/54)	1000 g	7424154	276,03
trousers red	XL (56/58)	1100 g	7424158	303,80
trousers red	XXL (60/62)	1200 g	7424162	317,60
storage bag	600 x 400 mm	160 g	7900000	21,14

Medium-voltage

Bird protection assemblies

protection of birds - put on stick

- for putting on a bird protection covering with vacuum-suck-technic
- vacuum will be produced by the supplying-device, not in the scope of delivery
- out of insulation tube 30 mm diameter with insulation hoses on the inside
- individual adjustable by an adjustable tooth clutch and adjustable holding of the suction cups
- activation of the suction mechanism by pressure outlet in the section of the handle
- by holding angle adjustable, can be hanged the put on stick at the pole traverse
- holding angle, adjustable, not in the scope of delivery
- with boundary disc and red ring, insulation distance 525 mm
- put on stick make it possible to put on bird protection coverings from the ladder and the not insulated lifting platform

36 kV

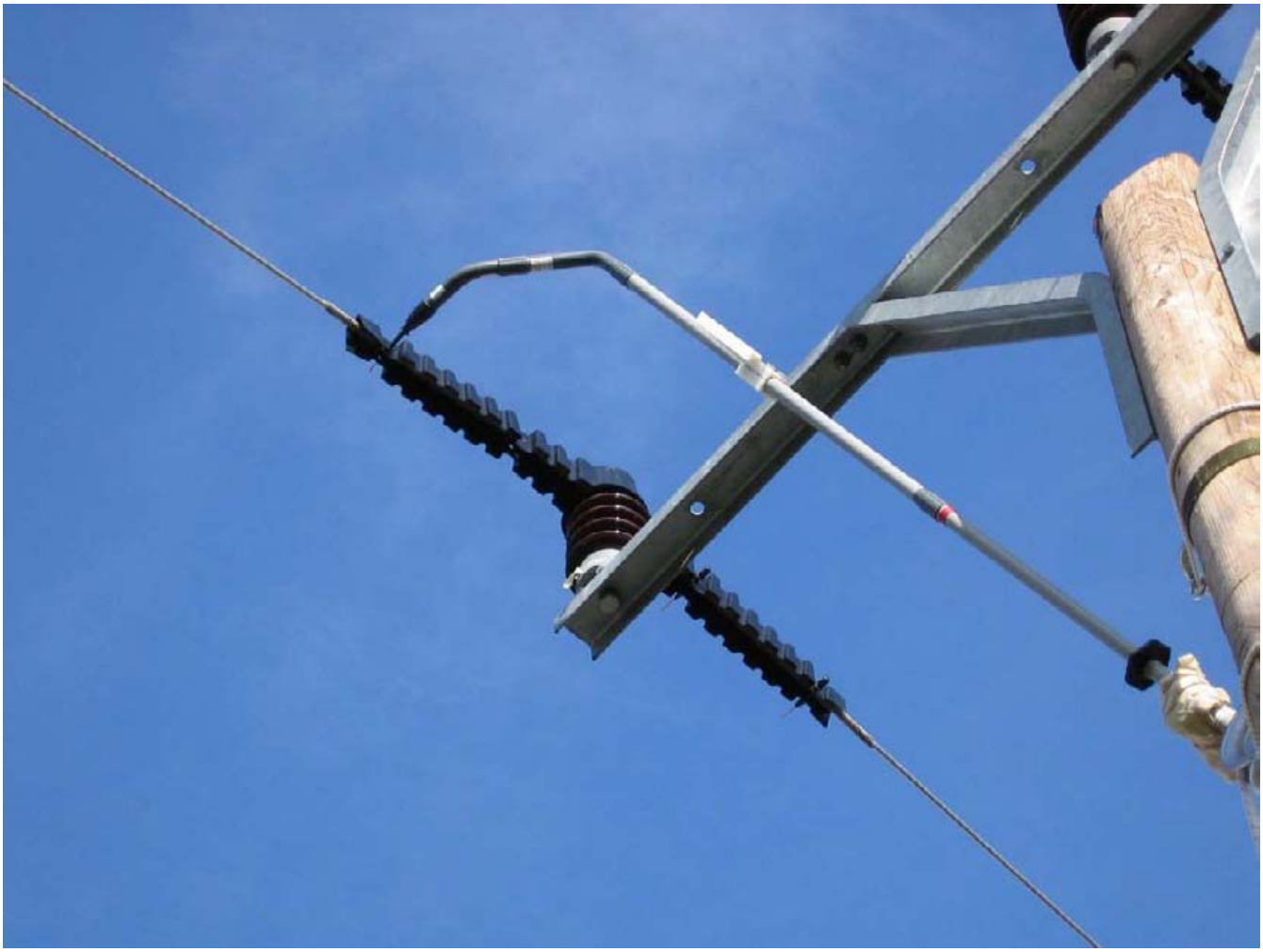
description	lenght	diameter	size	weigth	Article	euro
put on stick	2,80 m	30 mm	bis 36 kV	2,50 kg	7495200	on request

protection of birds accumulator screw driver up to 36 kV

- insulating accumulator screw driver for screwing of the fixing screws on the bird protection coverings
- in connection with the extension a purposeful screwing is possible
- the outside tube and shaft on the inside are out of insulation material
- with boundary disc and red ring, insulation distance 525 mm
- drived by 12 Vaccumulator-system in connection with a supply device
- form the ladder and out of the not insulated lifting platform, the attaching of the special screws is possible
- insulation tube diameter: 30 mm
- by angle, adjustable, 30 mm, can be hanged the put on stick at the pole traverse
- extension and supply device aren't in the scope of delivery
- //Bei Verlängerung Außenrohr und innenliegende Welle aus Isoliermaterial
- extension for completion of protection of birds accumulator screw driver
- protection of birds angle extension 90° serves for transmission of energy between accumulator screw driver Nr. 7 495 400 and work head Nr. 7 495 014
- out of insulation material with angle transmission out of sythetic material on the inside
- very low friction, because of that a high energy transmission without wear is possible
- work head for connection to angle extension Nr. 7 495 013
- because of that a three-dimensional adaption of the work head to the job is possible
- out of insulation material with angle transmission out of sythetic material on the inside
- very low friction, because of that a high energy transmission without wear is possible
- with inset SW 13 for addmission of fixing screws Nr. 7 990 000 on the bird protection coverings

36 kV

description	lenght	diameter	size	weigth	Article	euro
complete set, screw driver	2,80 m	30 mm	bis 36 kV	3,8 kg	7495250	on request
accumulator screw driver	1,40 m	30 mm	bis 36 kV	2,4 kg	7495400	on request
extension, screw driver	1,0 m	30 mm	bis 36 kV	0,6 kg	7495410	on request
angle extension	220 x 120 mm		bis 36 kV	440 g	7495420	on request
work head	145 x 120 mm		bis 36 kV	400 g	7495014	on request



protection of birds supplying device

- for operation of put on stick and accumulator screw driver for putting on bird protection coverings
- consists of a vaccum pump and a rechargeable replacement battery-pack(accumulator) for the bird protection equipment
- stabil leather case, incl. carrying belt

description	width	height	lenght	weigth	Article	euro
supplying device	140 mm	250 mm	340 mm	4,2 kg	7495300	on request

protection of birds operation stick with univ. tooth clutch

- with universal clutch
- because of that the operation stick can be expanded by an extension
- there can be attached also work heads with unversal tooth cluch
- diameter of the insulation tube 30 mm

36 kV

description	lenght	weigth	Article	euro
operation stick	2,00 m	1,80 kg	7810150	on request
extension	0,50 m	0,5 kg	7810050	on request
extension	1,00 m	1,0 kg	7810100	on request

insulated mirror overhead lines with universal clutch

- for insulating material with mirror-glass ø 135 mm
- for control of covered parts or damages in overhead lines
- with tooth cluth for connection to an extension and a handle with tooth clutch

36 kV

description	size	weigth	Article	euro
insulated mirror	bis 36 kV	250 g	7480125	on request

cutting stick for screws bird protections dismantling

- for cutting down of bird protection coverings
- out of insulation material, coam-filled, colour orange
- metalic cutting head for cutting the screws at old bird protection coverings
- the cutting head is so constructed, that the screws only can be cuted by one
  way and the cable can't be injured
- transmission of the cutting mechanism with additional insulation stick diameter
  10 mm
- activation of the scissors head over the lever mechanism
- with boundary disc and red ring

description	lenght	diameter	size	weigth	Article	euro
cutting stick	2,60 m	32 mm	24 kV	2,9 kg	7490100	on request

holding stick for overhead lines

- for dismantling of bird protection coverings
- out of insulation material, coam-filled, colour orange
- metalic work head for tighten of the cable
- transmission of the tightening mechanism with additional insulation stick diameter 15 mm
- holding of the closing mechanism over the securing lever with automatic fastening
- with boundary disc and red ring

description	lenght	diameter	size	weigth	Article	euro
holding stick	2,60 m	32 mm	24 kV	3,2 kg	7490200	on request

bird protection holding angle adjustable

- for putting in of bird protection equipment in traverses or poles
- consists of insulation material
- will be fasten on the outsided insulation tube
- individual adjustabilities by fixing screws

36 kV

description	lenght	diameter	size	weigth	Article	euro
angle	0 - 280 mm	30 mm		550 g	7480130	on request
angle	0 - 280 mm	32 mm		550 g	7480132	on request

protection of birds storage bag

- for transport and storing of bird protection equipment
- offers space for put on sticks, screw driver, incl. extension and angle
- offers furthermore space for handle, extension and mirror
- out of fabric strength PVC-tarpaulin-material, colour blue
- with single putting pockets and fixing Velcro fastener bands

description	width	lenght	weigth	Article	euro
storage bag	0,75 m	2,20 m	1400 g	7945100	on request

silicone fabric protection of birds

- cotton with silicone impregnated
- will be used to provide insulating pieces and handles, covers and other equipment with silicone
- will be delivered in a bag out of plastic

description	size	weigth	Article	euro
silicone fabric	30 x 40 cm	20 g	7900001	on request

protection of birds screw

- for fixing of the bird protection covering, patented
- out of insulation material, strengthened
- for use at different bird protection coverings with holes ø 10 mm
- suitable for Unipa, Tyco, Langmatz
- with six-sided SW 13

36 kV

description	lenght	diameter	size	weigth	Article	euro
screw	150 mm	9,8 mm	bis 36 kV	20 g	7990000	on request

insulating wheeled scaffold up to 220 kV

- fully out of GFK
- insulating up to 220 kV
- will be favoured for cleaningjobs up to 36 kV in switching buildings
- different heights and widths on request

description	size	weigth	Article	euro
wheeled scaffold			7433050	on request

branches cutting - extension

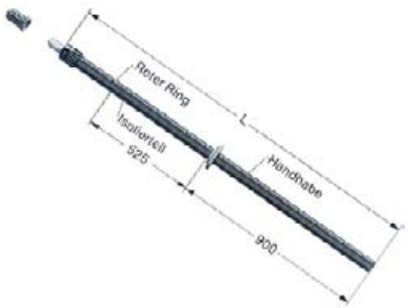
- for branches cutting of low voltage- and medium voltage overhead lines
- working with distance from the ground and also from the lifting platform is possible
- with glass-fibre reinforced polyester tube ø 36 mm, middle part, extension for admission of scissors, saw or further extension
- do not use during rain-,snow-,...-fall

description	lenght	size	Article	euro
extension	1,5 m	bis 30 kV	7510004	265,78
extension	2,0 m	bis 30 kV	7510005	288,80
extension	2,5 m	bis 30 kV	7510006	302,88

branches cutting - handle

- for branches cutting of low voltage- and medium voltage overhead lines
- working with distance from the ground and also from the lifting platform is possible
- with glass-fibre reinforced polyester tube ø 36 mm, middle part, extension for admission of scissors, saw or further extension
- do not use during rain-,snow-,...-fall

description	lenght	size	Article	euro
handle	1,5 m	bis 30 kV	7510001	187,60
handle	2,0 m	bis 30 kV	7510002	184,45
handle	2,5 m	bis 30 kV	7510003	232,80



branches cutting - saw

- for branches cutting of low voltage- and medium voltage overhead lines
- working with distance from the ground and also from the lifting platform is possible
- fitting to insulation stick bottom and top/head part
- with glass-fibre reinforced polyester
- do not use during rain-,snow-,...-fall

description	size	weigth	Article	euro
saw	bis 30 kV		7510007	166,65

branches cutting - scissors

- for branches cutting of low voltage- and medium voltage overhead lines
- working with distance from the ground and also from the lifting platform is possible
- fitting to insulation stick bottom and top/head part
- with perlon- pulling cable, ø 6 mm and 8 mm length
- do not use during rain-,snow-,...-fall

description	size	weigth	Article	euro
scissors	bis 30 kV		7510000	198,24

Overhead line assemblies

insulating protective gloves class 2

- class 2 (17 kV AC/ 25,5 kV DC)
- gloves straigth type
- in further two lengths(14" und 18") avialable on request
- protective gloves out of natural-latex 2-layered diped
- colours: inside yellow, outside black
- other colour combination avialable on request
- avialable in sizes 8-12

description	lenght	size	Article	euro
protective gloves	16"	8	7910003	on request
protective gloves	16"	9	7910004	on request
protective gloves	16"	10	7910005	on request
protective gloves	16"	11	7910006	on request
protective gloves	16"	12	7910007	on request

insulating protective gloves class 2

- class 2 (17 kV AC/ 25,5 kV DC)
- gloves (Bell Cuff) have on the wrist narrowed form
- in further two lengths(14" und 18") avialable on request
- protective gloves out of natural-latex 2-layered diped
- colours: inside yellow, outside black
- other colour combination avialable on request
- avialable in sizes 8-12

description	lenght	size	Article	euro
protective gloves	16"	8	7910013	on request
protective gloves	16"	9	7910014	on request
protective gloves	16"	10	7910015	on request
protective gloves	16"	11	7910016	on request
protective gloves	16"	12	7910017	on request

insulating protective gloves class 3

- class 3 (26,5 kV AC/ 39,75 kV DC)
- gloves straigth type
- in further two lengths(14" und 18") avialable on request
- protective gloves out of natural-latex 2-layered diped
- colours: inside yellow, outside black
- other colour combination avialable on request
- avialable in sizes 8-12

description	lenght	size	Article	euro
protective gloves	16"	8	7910008	on request
protective gloves	16"	9	7910009	on request
protective gloves	16"	10	7910010	on request
protective gloves	16"	11	7910011	on request
protective gloves	16"	12	7910012	on request

insulating protective gloves class 3

- class 3 (26,5 kV AC/ 39,75 kV DC)
- gloves (Bell Cuff) have on the wrist narrowed form
- in further two lengths(14" und 18") avialable on request
- protective gloves out of natural-latex 2-layered diped
- colours: inside yellow, outside black
- other colour combination avialable on request
- avialable in sizes 8-12

description	lenght	size	Article	euro
protective gloves	16"	8	7910018	on request
protective gloves	16"	9	7910019	on request
protective gloves	16"	10	7910020	on request
protective gloves	16"	11	7910021	on request
protective gloves	16"	12	7910022	on request

anti sweat safety gel

- is an alcoholic gel
- has a skin protective, skin caring and anti microbe qualtity
- astringent effect by the high part of Hamamelis extract
- because of this consolidation of the hard skin and therefore protection against skin softening
- skin caring effect through humidity complex made of panthenol and glycerine
- works anti bacterial by the alcohol content
- to apply to the hands before use of the work-under-voltage-gloves, causes a much lower sweat production
- avialable in 100-ml-bottle with one hand top

description	size	weigth	Article	euro
anti sweat protection gel	100 ml	110 g	7436000	6,33

leather protective gloves m. voltage

- gloves straight Form
- leather gloves on the wrist adjustable width by a band
- in further lengths (12" u. 16") avialable on request
- palms of the hands completly out of leather, shaft out of vinyl

description	lenght	size	Article	euro
leather gloves	14"	9	7910023	on request
leather gloves	14"	10	7910024	on request
leather gloves	14"	11	7910025	on request
leather gloves	14"	12	7910026	on request

storage bag for gloves, class 1-4

- serves for protection of the gloves by transporting or storing
- because of that the working life of the gloves will be increased
- out of durable, resistant cloth
- bag is specially made for 16"-protective gloves, other lengths on request

description	size	weigth	Article	euro
storage bag	B229mm x L457 mm	250 g	7910035	on request

insulating sleeves class 2

- shape lightly curved
- on request the shape can be extra curved or just straight
- class 2 (17 kV AC/ 25,5 kV DC)
- serves for insulation of arms, form the gloves to the shoulders
- sleeves out of natural - latex 2-layered diped
- colours: inside yellow, outside black
- other colour combination avialable on request
- avialable in the sizes M, L, XL

description	lenght	size	Article	euro
sleeves	A/673 B/394 C/311 D/146 mm	M	7910027	on request
sleeves	A/705 B/406 C/327 D/175 mm	L	7910028	on request
sleeves	A/749 B/445 C/327 D/178 mm	XL	7910029	on request

holding insulating sleeves

- holding prevents sliping of the sleeves into the gloves
- because of that it's guaranteed, that the shoulders will be supported during the whole assembly
- holding is equipped with 4 fixing buttons
- holding is incl. 4 one piece buttons
- fixing bands are paired and incl. 2 one piece fixing buttons

description	lenght	weigth	Article	euro
holding			7910030	on request
fixing band with buttons	343 mm		7910031	on request
fixing band with buttons	381 mm		7910032	on request
one piece button			7910033	on request
two part buttons			7910034	on request

storage bag for insulating sleeves, medium voltage

- serves for protection of the sleeves while transporting and storing
- because of that the working life of the sleeves will be increased
- bag is made of special coated material for giving best protection

description	size	weigth	Article	euro
storage bag	B241 mm x L836 mm		7910036	on request

liquid cleaner for insulating gloves/sleeves

- ideal for cleaning of insulating gloves and sleeves
- concentrate based on water
- cleans oil and dirt
- contents ca. 4,5 liter

description	capacity	weigth	Article	euro
liquid cleaner	4,5 l		7910037	on request

insulating cable cover class 3

- serves for covering of medium voltage overhead lines
- type 3 authorized up to 24 kV
- made of orange synthetic material
- will be also flexible by cold weather
- is ozone- and UV-resistant
- type 1 has at both ends outside-lying grooves
- type 2 has at one end a proof-lips with inside-lying grooves, on the other end ouside-lying grooves
- covering are to lengthen by putting covering type 1 with type 2 together
- inside diameter 40 mm, other diameter on request

description	lenght	weigth	Article	euro
insulating cable cover type 1	915 mm	2,3 kg	7910038	on request
insulating cable cover type 1	1372 mm	3,2 kg	7910039	on request
insulating cable cover type 1	1820 mm	4,3 kg	7910040	on request
insulating cable cover type 2	915 mm	2,7 kg	7910041	on request
insulating cable cover type 2	1372 mm	3,6 kg	7910042	on request
insulating cable cover type 2	1820 mm	4,1 kg	7910043	on request

insulating cable cover, linker class 3

- serves for linking of insulating cable cover type 1
- type 3 authorized up to 24 kV
- made of orange synthetic material
- will be also flexible by cold weather
- is ozone- and UV-resistant
- inside diameter 38/40 mm

description	lenght	weigth	Article	euro
linker	305 mm	1,4 kg	7910044	on request

storage bag for insulating cable cover, class 3

- storage bag, assembly bag serves for transporting and can be fixed by a cable with snaplinks while assembly at the insulating basket
- bag is made of water proofed, coated fabric

description	lenght	diameter	size	weigth	Article	euro
storage bag	152 cm	30 cm		1,2 kg	7910074	on request

insulating covering cloth class 4, not punched

- serves for covering of medium voltage overhead lines
- class 4 authorized up to 36 kV
- made of orange synthetic material
- will be also flexible by cold weather
- is ozone- and UV-resistant
- without fixing holes

description	size	weigth	Article	euro
insulating covering cloth, not punched	B457 mm x L914 mm	1,7 kg	7910056	on request
insulating covering cloth, not punched	B685 mm x L914 mm	2,3 kg	7910057	on request
insulating covering cloth, not punched	B1168 mm x L1168 mm	5,4 kg	7910058	on request

insulating covering cloth class 4, not sloted

- serves for covering of medium voltage overhead lines
- class 4 authorized up to 36 kV
- made of orange synthetic material
- will be also flexible by cold weather
- is ozone- and UV-resistant
- with holes, for fixing the cover with special buttons or bands

description	size	weigth	Article	euro
covering cloth 10 holes	B559 mm x L559 mm	1,4 kg	7910047	on request
covering cloth 6 holes	B686 mm x L914 mm	2,3 kg	7910048	on request
covering cloth 6 holes	B914 mm x L914 mm	3,6 kg	7910049	on request
covering cloth 12 holes	B914 mm x L914 mm	3,6 kg	7910050	on request
covering cloth 28 holes	B914 mm x L914 mm	3,6 kg	7910051	on request
covering cloth 6 holes	B1168 mm x L1168 mm	5,4 kg	7910052	on request

insulating covering cloth class 4, sloted

- serves for covering of medium voltage overhead lines
- class 4 authorized up to 36 kV
- made of orange synthetic material
- will be also flexible by cold weather
- is ozone- and UV-resistant
- with holes, for fixing the cover with special buttons or bands
- sloted version

description	size	weigth	Article	euro
	B914 mm x L914 mm	3,2 kg	7910068	on request
covering cloth 28 holes	B559 mm x L559 mm	1,1 kg	7910053	on request
covering cloth 28 holes	B914 mm x L914 mm	3,2 kg	7910054	on request
covering cloth, 11 cm sloted	B914 mm x L914 mm	3,2 kg	7910055	on request

fixing buttons for insulating cover cloth

- buttons one-way serving vor fixing of the insulating cover cloth with holes class 4, will be attached by hand
- made of yellow plastic
- buttons two-way out of polyster can be attached further with insulating handles
- bands serves for fixing of the cloth at the poles or traverses, at the same time will be the band puted around the insulation cloth and fixed

description	lenght	weigth	Article	euro
fixing buttons one-way		0,1 kg	7910059	on request
fixing buttons two ways		0,3 kg	7910060	on request
fixing band 14"	356 mm	1,5 kg	7910061	on request
fixing band 30"	762 mm	1,5 kg	7910062	on request

insulating clamp medium voltag overhead lines

- insulating clamps serves for fixing of insulating cloth class 4
- cloth can be fixed on the insulators or traverses by the large opening width
- clamps non-slip through coating of the head
- made of synthetic material
- opening width: 127 mm

description	lenght	weigth	Article	euro
clamp	241 mm	0,2 kg	7910063	on request

storage bag for cover cloth, class 4

- serves for protection of the insulating cover cloth while transporting and storing
- rolled bag 1 serves for storing of 1 - 4 cover cloth with a size of max. 559 mm
- rolled bag 2 serves for storing of 1 - 4 cover cloth with a size of max. 1168 mm
- bag is made of water proofed cotton fabric
- cloth will be fixed by turning a side part, after that the bag will be rolled up and locked with bands

description	size	weigth	Article	euro
rolled bag 1	B838 mm x L1041 mm	0,7 kg	7910066	on request
rolled bag 2	B1371 mm x L1161 mm	1,1 kg	7910067	on request

storage canister for insultating cover cloth

- canister serves for protection of the insulating cover cloth while transporting and storing
- top is protected by a polypropylen cable
- roll bag 1 serves for storing of 1 - 6 cover cloth with a size of max. 914 mm
- roll bag 2 serves for storing of 1 - 2 cover cloth with a size of max. 1168 mm
- canister is made of highly tough PE(polyethylene)

description	lenght	diameter	size	weigth	Article	euro
canister 1	940 mm	229 mm		2,3 kg	7910064	on request
canister 2	1194 mm	152 mm		1,8 kg	7910065	on request

insulating cover for m. voltage support insulators, MRG

- serves for covering of medium voltage support insulators
- class 4
- made of orange synthetic material
- will be also flexible by cold weather
- is ozone- and UV-resistant
- on the insides grooved, consequently a connection with an insulated cable cover 38/ 40 mm diameter is possible
- for insulators up to 213 mm diameter
- can also be used for insulator cover of the helping traverses

description	width	height	lenght	weigth	Article	euro
cover		306 mm		3,2 kg	7910080	on request

insulating cover for m. voltage support-insulators, OKRG

- serves for covering of medium voltage support insulators
- class 4
- made of orange synthetic material
- will be also flexible by cold weather
- is ozone- and UV-resistant
- on the insides grooved, consequently a connection with an insulated cable cover 38/ 40 mm diameter is possible
- for insulators up to 213 mm diameter

description	width	height	lenght	weigth	Article	euro
cover	406 mm	203 mm		3,2 kg	7910045	on request

insulating cover for m. voltage support insulators, PTHL

- serves for covering of medium voltage support insulators
- class 4
- made of orange synthetic material
- will be also flexible by cold weather
- is ozone- and UV-resistant
- on the insides grooved, consequently a connection with an insulated cable cover 38/ 40 mm diameter is possible
- for insulators up to 213 mm diameter
- can also be used for insulator cover of the helping traverses
- for insulators up to 163 mm diameter

description	width	height	lenght	weigth	Article	euro
cover		400 mm		3,6 kg	7910046	on request

isulating cap for PTHS insulators

- for covering medium voltage support insulators
- class 4
- also flexible in cold areas
- made of orange plastic
- resistend against ozone and ultraviolet rays
- inside grooved for connecting with the isulating cable cover

description	width	height	lenght	weigth	Article	euro
isulating cap		300 mm		3,2	7910071	on request

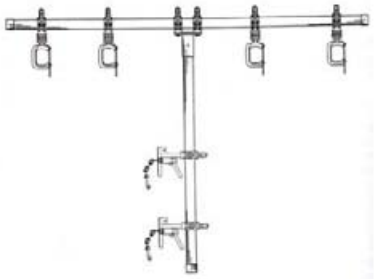
insulating cover for m. voltage overhead line poles

- cover class 4
- the insulating cover will be attached to the pole, before the pole will be pricked up
- they can also be used, if the employee with the glove process could have contact to the pole
- if the pole cover should be made longer, the covers are made in that way, so that they could only attached together at specific positions
- so is guaranteed, that an appropriate overlap of the covers is avialable
- cover size 1 is for pole diameters up to 228 mm
- cover size 2 is for pole diameters up to 304 mm

description	lenght	weigth	Article	euro
cover size 1	1,20 m	5,4 kg	7910069	on request
cover size 1	1,80 m	8,6 kg	7910070	on request
cover size 2	1,20 m	6,8 kg	7910072	on request
cover size 2	1,80 m	10,0 kg	7910073	on request

helping traverse for m. voltage overhead lines up to 24kV

- use for changing of traverses, insulators and poles
- length of pole of the helping traverse: 1,82 m
  length of the horizontal pole: 2,44 m
- the helping traverse has without supply a carrying power of 68 kg and with supply a carrying power of 272 kg
- supply for helping traverse not in the scope of delivery
- helping traverse can be fixed to the pole by a attaching device
- helping traverse incl. insulators



description	size	weigth	Article	euro
helping traverse	bis 24 kV	29,5 kg	7910001	on request

temporarily cable holder up to 24 kV

- can be attached to the pole by ratchet bands
- incl. insulators and cable holder up to 24 kV
- diameter of the GFK-tube 63 mm
- for temporary addmission of overhead lines

description	lenght	weigth	Article	euro
cable holder with 1 insulator	0,92 m	6,4 kg	7910094	on request
cable holder with 2 insulators	1,22 m	7,7 kg	7910095	on request

cable tightening and connection stick, load hook m. v.

- serves for connection between overhead line-cable and insulation cable, for tightening of the overhead line cable
- serves for spreading of the cable with the insulation cable and the block and tackel on rather push pull cables
- out of GFK-tube, diameter 32 mm, with load let with spring protection
- spring protection prevents the slipping of the overhead line-cable out of the eyelet
- length of the insulation tube 30,5 cm
- whole length 55,9 cm
- up to 36 kV
- max. tensile forces 2000 Kg
- other lengths, eyelet types and maximal tensile forces avialable on request

description	pull-load	Article	euro
cable tightening stick	2000 Kg	7910082	on request

cable tightening and connection stick, m. v.

- serves for connection between overhead line-cable and insulation cable, for tightening of the overhead line cable
- serves for spreading of the cable with the insulation cable and the block and tackel on rather push pull cables
- out of GFK-tube, diameter 32 mm, with thread and eyelet
- length of the insulation tube 30,5 cm
- whole length 67 cm
- up to 36 kV
- max. tensile forces 1750 Kg
- other lengths, eyelet types and maximal tensile forces avialable on request

description	pull-load	Article	euro
cable tightening stick	1750 kg	7910083	on request

bypass-jumper up to 35 kV /220 A

- serves for getting through of overhead lines, for assembly work under voltage
- consists of 2 connection clamps and cable
- highly flexible rubber mantled cable
- rubber mantling is resistant by deep temperatures and against UV- radiation
- cable length: 3,7 m other lengths avialable on request
- jumper for a nominal electric current load up to 250 A, other sizes avialable on request
- jumper will be attached by the glove process

description	lenght	weigth	Article	euro
jumper 35 kV/ 250 A	3,7 m	9,2 kg	7910075	on request

bypass-jumper stick process up to 35 kV /220 A

- serves for getting through of overhead lines, for assembly work under voltage
- consists of 2 connection clamps and cable
- highly flexible rubber mantled cable
- rubber mantling is resistant by deep temperatures and against UV- radiation
- cable length: 3 m other lengths avialable on request
- jumper for a nominal electric current load up to 250 A, other sizes avialable on request
- jumper will be attached by insulation handles/universal hook stick

description	lenght	weigth	Article	euro
jumper	3,0 m	5,6 kg	7910076	on request

bypass-jumper holding/ park position

- serves for holding on rather park position of bypass-jumpers
- consists of insulating GFK-tube and one connection clamps
- can be attached by gloves- and stick process on the overhead line

description	lenght	diameter	size	weigth	Article	euro
holding	300 mm	4-29 mm		1,6 kg	7910081	on request

hook stick up to 36 kV

- hook stick out of insulating, glass-fibre strengthen plastic
- for putting on cable covers, insulator covers, jumper and work heads
- checking 100 kV/ 30 cm
- diameter of the hook stick 32 mm

description	lenght	weigth	Article	euro
hook stick	1,2 m	1,8 kg	7910077	on request
hook stick	2,0 m	2,6 kg	7910078	on request
hook stick	2,6 m	3,0 kg	7910079	on request
hook stick	3,2 m	5,0 kg	7910090	on request

measuring instrument for cable tautness

- measuring instrument for checking the cable tautness
- will be attached by hook stick
- span section form 12 to 220 mm²
- reading of the cable tautness 0 - 13 kN, accuracy 10 %
- serves for calculation of forces by assembly under voltage in the medium voltage overhead line section

description	width	height	lenght	weigth	Article	euro
measuring instrument	540 mm	390 mm		3,9 kg	7910093	on request

cable tightening device medium voltage assembly

- for assembly up to 36 kV
- serves for tightening before of the overhead line for changing unyoke insulators
- will be fixed one sided with a loop on the traverse, on the other side with a tightening clamp on the overhead line cable
- cable can be max. tighten 20 cm with an insulating handle
- cable tightening clamp 4,7 - 15,2 mm not in the delivery scale
- max. load-bearing capacity 11 kN
- cable tightening device will be hanged with hook stick

description	lenght	weigth	Article	euro
cable tightening device	1,10 - 1,30 m	8,0 kg	7910091	on request
cable tightening clamp		1,5 kg	7910092	on request

silicone cloth overhead line assembly

- cotton with silicone impragnated
- will be used to impragnate pieces of the handle and covers as well as other equipment with silicone
- will be delivered in a plastic bag

description	size	weigth	Article	euro
silicone cloth	30 x 40 cm	20 g	7900001	on request

insulating lifting platform up to 36 kV

We are the Germany agency of the company Altec

for:

- insulating lifting platforms for use under voltage in the medium voltage overhead line section up to 36 kV

Our devices are in accordance with the EN 61057 (VDE 0682/741).

We can attach our devices to all commen porting vehicles.
For example MAN or Mercedes.
We can delivere the devices with one or two work basket, with or without load arm.
Furthermore the insulating lifting platforms are deliverable as Overcenter as well as telescope variant.
The work height is depending on the device from 12,5 m till 22,8 m.
We have in the range devices, which can lift up to 1000 kg.
Furthermore we have a device, for training, Overcenter, with a work height of 18 m, with 2 work baskets and a load arm, which has a carrying power of all in all 1000 kg, attached to a 18t MAN-HGW, 4x4.
This device we can also leasing out to you.

There is the possibility to attach to all porting vehicles boxes(alu, plastic, steel) for cloth, profiles, sticks and other.

With pleasure we will introduce the device to you or we will present you an individual offer.

description	Version	Article	euro
insulating lifting platform		7910100	on request

earthing circuit warn device for wuv up to 24 kV

- for showing of earth circuits on rather earth circuit wipers
- reacts by 40 % over - on rather under voltage
- for hanging in busbars and overhead lines
- through change-over switch usable for 12 and 24 kV
- through loud acoustic signal also audible by dry cleaning
- there will be also shown a optical signal by over - on rather under voltage
- therefore will be supported the time delayed information through the power supply leading place by instantly displaying
- because of that the safety of working by working under voltage will be extended again
- different hanging up devices, busbars, cables on request

24 kV

description	rated voltage	Ig	Ii	Ih	Iv	Article	euro
earthing warn device	12/ 24 kV					7497000	on request

isulating camera for live working

The BSD isulating camera can be used for live working in indoor and outdoor systems up to 36 kV, apllying the tested "hot stick" working mothed.
For instance, rating plates can easily be read and recorded. The picture is output on the TFT monitor, or via TV card on an external PC or laptop, which simultaneously makes quick documentation and archiving possible.

The complete camera consists of:
- insulating camera with transmitter
- reception part
- universal dentzre clutch for connecting to actuation stick
- TFT screen, 7" picture diagonal
- battery and charger
- robust storage and transport case

Don´t use it in a relative humidity up to 90 % or in rainy weather!

36 kV

description	field	weigth	Article	euro
isulating camera	36 kV	3,4 kg	7480080	on request

standing traverse for switch revision

- out of PVC
- with a 4-sided tube and an updatable universal holding for traverse 7 660 001 an admission of different operation sticks is possible, for example a locking of the hurry after contacts is possible
- traverse has 2 diagonally bracings(protection strips) in ca. 600 on rather 1200 mm height
- with the traverse can be adjusted the minimum distance for work under voltage indidually
- the traverse serves for visual and physical control barrier
- for cells up to 160 cm width
- traverse is removable
- univeral holding serves in connection with standing traverse for switch revision as pad for operation tools and locking for example for hurry after contacts
- in the traverse can be inserted operation tools, which diameter is smaller than 35 mm

description	size	weigth	Article	euro
standing traverse with 4-sided		15 kg	7660401	on request
universal holding		0,5 kg	7660001	on request

cleaning set with supervision, dry cleaning 36 kV

- specially for cleaning indoor and outdoor systems up to 36 kV
- variety of working heads and receptacles mean greater range of applications
- with coam insets in the ground and top part, because it will be prevented a damage of the insulation tubes while the storage
- supplied in a transport case
- hygro-thermometer with supervision

components:

01.	1	vacuum tube with handle	7480012
02.	1	extension,	7480015
03.	2	extension,	7480014
04.	2	extension,	7480013
05.	1	tubular brush, cylind.	7480038
06.	1	tubular brush, con.	7480039
07.	1	adapter 40/25 mm	7480089
08.	1	tubular brush, 200 mm	7480300
09.	1	tubular brush, 250 mm	7480022
10.	1	brush bent	7480037
11.	1	nozzle	7480024
12.	1	nozzle	7480091
13.	1	nozzle	7480023
14.	1	nozzle	7480026
15.	1	tube angle 90°	7480017
16.	1	tube angle 45°	7480028
17.	1	clean brush 40 mm	7480060
18.	1	clean brush 25 mm	7480500
19.	1	hygro-thermometer supervision	7480035
20.	1	isulated mirror	7480225
21.	1	vacuum hose adapter	7480041
22.	1	storage case	7480011

description	size	weigth	Article	euro
	1260 x 360 x 210 mm	10,2 kg	7480100	on request

cleaning set for dry cleaning up to 36 kV

- dry cleaning set for cleaning of inside systems and open air systems
- for dry cleaning of transformers and switching systems
- special adjusted work heads for intensive cleaning
- pinning clutch system for quickly re-equiping of the work heads
- do not use while rainfall!!
- storage case for transport and in accordance with the storage of the equipment pieces of the dry cleaning sets up to 36 kV
- with coam insets in the ground and top part, because it will be prevented a damage of the insulation tubes while the storage
- made of glass-fibre strenghened plastic, empty

standard equipped:

01.	1	vacuum tube with handle	7480012
02.	1	extension, 800 mm	7480015
03.	2	extension, 400 mm	7480014
04.	2	extension, 200 mm	7480013
05.	1	tubular brush, cylind.	7480038
06.	1	tubular brush, con.	7480039
07.	1	adapter 40/25 mm	7480089
08.	1	tubular brush, 200 mm	7480300
09.	1	tubular brush, 250 mm	7480022
10.	1	brush bent	7480037
11.	1	nozzle 60	7480024
12.	1	nozzle 60 long	7480091
13.	1	nozzle 110	7480023
14.	1	nozzle 210	7480026
15.	1	tube angle 90°	7480017
16.	1	tube angle 45°	7480028
17.	1	clean brush 40 mm	7480060
18.	1	clean brush 25 mm	7480500
19.	1	hygro-thermometer	7480029
20.	1	isulated mirror	7480225
21.	1	vacuum hose adapter	7480041
22.	1	storage case	7480011

36 kV

description	size	weigth	Article	euro
cleaning set	bis 36 kV	13,5 kg	7480000	on request
storage case dry cleaning	1260 x 360 x 210 mm	9,8 kg	7480011	on request

vacuum tube with handle, m. voltage cleaning

- as operation tube ø 40 mm, whole length 1180 mm with handle, boundary disc, insulation part, red ring and extension part
- serves for handle for dry cleaning in connection with vacuum adapter and extension on rather work heads

36 kV

description	lenght	weigth	Article	euro
vacuum tube with handle	1200 mm	670 g	7480012	on request

extension 36 kV m. voltage dry cleaning

- insulation tube ø 40 mm, with bottom and top/head connection part

36 kV

description	lenght	weigth	Article	euro
extension V2	200 mm	110 g	7480013	on request
extension V3	400 mm	220 g	7480014	on request
extension V4	800 mm	430 g	7480015	on request
	1500 mm	700 g	7480049	on request

storage bag for extensions, medium voltage

- for extensions and working heads with a length up to 150 cm
- imitation leather

description	lenght	weigth	Article	euro
storage bag	1550 mm	650 g	7480280	on request

vacuum tube angle, dry cleaning m. voltage

- vacuum tube diameter 40 mm

36 kV

description	size	weigth	Article	euro
vacuum tube angle 135°	100 mm	150 g	7480018	on request
vacuum tube angle 90°	120 mm	200 g	7480017	on request

nozzle medium voltage dry cleaning

- for cleaning of flat areas, for example floors, walls or something like that
- nozzle 60, length 200 mm
- nozzle 60 extra long, length 300 mm - specially suitable for cleaning of cooling fins of transformers
- nozzle 110, length: 200 mm
- nozzle 210, length: 240 mm - specially suitable for vacuuming walls or floors

36 kV

description	width	weigth	Article	euro
nozzle 60	60 mm	100 g	7480024	on request
nozzle 60 extra long	60 mm	140 g	7480091	on request
nozzle 110	110 mm	160 g	7480023	on request
nozzle 210	210 mm	230 g	7480026	on request

tubular brush, dry cleaning medium voltage

- for cleaning of hardly accessible insulators and system constructions

36 kV

description	lenght	diameter	size	Article	euro
tubular brush, cylindrical	250 mm	40 / 120 mm	36 kV	7480022	on request

tubular brush, dry cleaning medium voltage

- for cleaning of hardly accessible insulators and system constructions
- without brush head

36 kV

description	lenght	diameter	size	Article	euro
tubular brush	200 mm	40/ 120 mm	36 kV	7480300	on request

tubular brush small, dry cleaning medium voltage

- ø 25 mm tube diameter
- cylindrical bristles

36 kV

description	diameter	weigth	Article	euro
tubular brush	25/85 mm	240 g	7480038	on request

tubular brush small, dry cleaning medium voltage

- ø 25 mm tube diameter
- without brush head
- cylindrical bristles

36 kV

description	diameter	weigth	Article	euro
tubular brush	25/85 mm	230 g	7480350	on request

tubular brush small 2, dry cleaning medium voltage

- ø 25 mm tube diameter
- conical bristles

36 kV

description	diameter	weigth	Article	euro
tubular brush	25/85 mm	230 g	7480039	on request

tubular brush small 2, dry cleaning medium voltage

- ø 25 mm tube diameter
- without brush head
- conical bristles

36 kV

description	diameter	weigth	Article	euro
tubular brush	25/85 mm	230 g	7480400	on request

adapter for small tubular brushes m. voltage cleaning

- for coupling of the vacuum tube ø 40 mm to the small tubular brushes Nr. 7480038, 748039
- ø 20 mm tube diameter

36 kV

description	size	weigth	Article	euro
adapter	100 mm	80 g	7480089	on request

brush bent dry cleaning set

- brush ø 40 mm, 390 mm long
- for cleaning of insulators and hardly accessable regions (at the top lying insulators)

36 kV

description	size	weigth	Article	euro
brush bent	390 mm	260 g	7480037	on request

rectangle brush m. voltage dry cleaning

- for cleaning of flat insulators and system constructions
- in connection with angle 15° adjustable

36 kV

description	size	weigth	Article	euro
rectangle brush	105 x 90 x 50 mm		7480021	on request

insulated mirror for inside systems up to 36 kV

- out of insulation material with mirror glass ø 135 mm
- with tooth clutch for connection to the extension and handle with tooth clutch
- the mirror is also for putting on insulation tubes/sticks ø 40 mm for dry cleaning sets
- so it can be adapted to dry and wet cleaning set
- ø 135 mm
- for checking of covered components
- up to 36 kV

36 kV

description	size	weigth	Article	euro
insulation mirror	bis 36 kV	250 g	7480225	on request

hygro-thermometer with supervision

- supervises automatically the relative air humidity and warns with acoustic and visual signals if it´s to high
- acoustic signal sounds louder than the noise of the vacuum cleaner
- selfsupervision of the battery
- conditions: - 20°... + 60°C
  10 ... 95% r. F.
  tolerance 2,0% r.F and 0,5 °C

description	size	weigth	Article	euro
hygro-thermometer	170x100x55 mm	900 g	7480035	995,00

digital-hygro-thermometer

- for checking of the keeping climatic requirements
- measuaring field/section: - 20°... + 70°C
  10 ... 95% r. F.

description	size	weigth	Article	euro
digital-hygro-thermometer	140 mm	150 g	7480029	on request

cleaning brush 40 mm for medium voltage cleaning set

- serves for cleaning of inside walls of poluted vacuum tubes, brushes and nozzle
- sponge Art-Nr. 7 492 024 of the cleaning brush 7 480 060 exchangeable
- attention unsuitable for work under voltage!

description	lenght	weigth	Article	euro
cleaning brush	1430 mm	250 g	7480060	on request

cleaning brush 25 mm, medium voltage cleaning set

- for cleaning dirty elements of the cleaning set like nozzles, brushes or suction pipes
- sponge changeable
- Caution! Not for live working!

description	lenght	weigth	Article	euro
cleaning brush	340 mm	330 g	7480500	on request

storage bag vacuum hoses medium voltage

- for transport und storing of vacuum hoses
- out of sailcloth, blue

description	size	weigth	Article	euro
storage bag	550 x 300 x 240 mm	300 g	7480031	on request

vacuum hose adapter, m. voltage dry cleaning

- for coupling of vacuum hoses with connection parts 35 mm in the handle section
- revolving
- with vacuum air regulation

description	lenght	weigth	Article	euro
vacuum hose adapter	135 mm	200 g	7480041	on request

reducing part, medium voltage dry cleaning

- as connection part between vacuum hose adapter and vacuum hose with straight connection part

description	lenght	size	Article	euro
RSI 32 medium voltage	105 mm	ø 35 / ø 32	7480071	on request
RSI 34 medium voltage	105 mm	ø 35 / ø 34	7480072	on request
RSI 35 medium voltage	105 mm	ø 35 / ø 35	7480070	on request
RSI 38 medium voltage	105 mm	ø 35 / ø 38	7480073	on request
RSI 45 medium voltage	105 mm	ø 35 / ø 45	7480074	on request
RSI 51 medium voltage	105 mm	ø 35 / ø 51	7480075	on request

adapter dry cleaning set/ wet cleaning set

- for connection of work heads of the wet cleaning set to the dry cleaning set
- on one side modular to 40 mm vacuum tube of the dry cleaning set
- on the other side eligible with universal tooth- (tc) on rather screw clutch (sc)

36 kV

description	size	weigth	Article	euro
adapter (tc)	125 mm	100 g	7480036	on request

storage tarpauling, equipment, m. voltage inside systems

- for clean and in accordance with putting down of equipment
- out of PVC-coated polyester, yellow

description	size	weigth	Article	euro
storage tarpauling	1,5 x 2,0 m	900 g	7480030	on request

cleaning set in case wet cleaning, medium voltage

- following the DIN VDE 0681 part 1 DIN VDE 0682 part 621
- suitable for indoor- and outdoor installations
- equipment for wet cleaning under voltage with special cleaning liquid
- the used special cleaning liquid is to choose in accordance with the determination voltage
- specially adjusted work heads(flat-, semicircular sponge admission for intensive cleaning)
- put on technic for simple and fast sponge changing
- universal tooth clutch for re-equiping and bending of the work heads
- delivery in special plastic case with supply according to the following list
- other supplies are avialable on request
- do not use during rainfall!
- storage bag for storing and transporting of the medium voltage wet cleaning parts

basic equipment:

01.	1	storage bag	7492101
02.	1	insulation stick with handle	7492002
03.	1	extension, 200 mm	7492003
04.	1	extension, 400 mm	7492005
05.	1	extension, 800 mm	7492082
06.	1	admission incl. brush	7493014
07.	1	working head, single	7492056
08.	1	working head, single felx.	7492050
09.	1	working head, twice	7492063
10.	1	working head, twice flex.	7492051
11.	1	admission, working surface	7493026
12.	1	admission semicicular	7492053
13.	1	universal adapter	7493019
14.	1	admission tooth clutch	7493021
15.	10	sponge 50 x 50 x 150 mm	7492052
16.	10	sponge 40 x 70 x 150 mm	7492053
17.	10	sponge 40 x 105 x 150 mm	7492054
18.	10	sponge 40 x 105 x 150 mm	7492055
19.	10	sponge 150 x 30 x 20 mm	7492023
20.	1	adapter dry - wet	7480036
21.	1	working head, single bent	7492062

36 kV

description	width	height	lenght	weigth	Article	euro
wet cleaning set	300 mm	100 mm	800 mm	3,8 kg	7492100	on request
storage case	300 mm	100 mm	800 mm	0,7 kg	7492101	on request

cleaning heads in the bag, wet cleaning, m. voltage

- list which can be used in connection with the dry cleaning set for relinquishing to further handles
- equipment for wet cleaning under voltage with special cleaning liquid
- suitable for wet cleaning or waxing of for example insulator tops
- suitable for indoor- and outdoor installations, do not use during rainfall!
- specially adjusted work heads(semicircular sponge admission for intensive cleaning)
- Velcro fastener technic and pinning technic of the sponges for quick changing of the cleaning sponges
- curved stripes, tooth cluth as connection device for extension, angle and work heads
- delivery in special synthetic leather bag with supply according to the following list
- in combination with dry cleaning set Art. 7480 000 usable to see on the pages before
- other supplies are avialable on request

contents of the bag wet cleaning set:

01.	1	synthetic leather bag	800x280x120 mm	7480043
02.	1	adapter dry-/wet cleaning with tooth clutch	150 mm	7480036
03.	1	working head, single		7493016
04.	1	working head, single felx.		7493018
05.	1	working head, single bent		7493020
06.	1	working head, twice		7492056
07.	1	working head, twice flex.		7492062
08.	1	admission incl. brush		7493014
09.	1	admission semicicular	150 x 30 mm	7493016
10.	1	universal adapter		7493019
11.	1	admission, working surface		7493026
12.	1	admission sponge moveable	80 x 60 mm	7493020
13.	10	cleaning sponge	40 x 40 x 150 mm	7492052
14.	10	cleaning sponge	40 x 70 x 150 mm	7492053
15.	10	cleaning sponge	40 x 100 x 150 mm	7492054
16.	10	cleaning sponge	40 x 100 x 150 mm	7482055

36 kV

description	width	height	lenght	weigth	Article	euro
wet cleaning set m. voltage	280 mm	120 mm	800 mm	3,5 kg	7480042	on request
synthetic leather bag	280 mm	120 mm	800 mm	0,6 kg	7480043	on request

cleaning set dry/wet cl. combination supervision

- for cleaning of indoor and outdoor installations up to 36 kVfor dry- and wet cleaning
- pinning clutch system for quick re-equiping of the work heads dry cleaning
- tooth clutch system for quick re-equiping and bending of the wet cleaning heads
- storage case for transporting and in accordance with stroring of the equipment parts
- with coam insets in the ground and top part, because of that a damage of the insulation tubes while the storage will be prevented
- the used special cleaning liquid is to choose in accordance with the determination voltage
- specially adjusted work heads(for intensive cleaning)
- delivery in special plastic case with supply according to the following list
- other supplies are avialable on request
- do not use during rainfall!
- hygro-thermometer with supervision

standard equipped:

01.	1	storage bag	7492013
02.	1	vacuum tube with handle	7480012
03.	2	extension, 200 mm	7480013
04.	2	extension, 400 mm	7480014
05.	1	extension, 800 mm	7480015
06.	1	vacuum tube angle 45°	7480018
07.	1	vacuum tube angle 90°	7480017
08.	1	nozzle 60	7480024
09.	1	nozzle 60 long	7480091
10.	1	nozzle 110	7480023
11.	1	nozzle 210	7480026
12.	1	tubular brush, bristles cylindrical	7480038
13.	1	tubular brush, bristles conical	7480039
14.	1	vacuum tube adapter	7480089
15.	1	tubular brush, 250 mm	7480022
16.	1	tubular brush without head	7480300
17.	1	brush bent	7480037
18.	1	isulated mirror	7480025
19.	1	vacuum haose adapter	7480041
20.	1	hygro-thermometer supervision	7480035
21.	1	cleaning brush 40 mm	7480060
22.	1	cleaning brush 25 mm	7480500
23.	1	adapter dry - wet	7480036
24.	1	working head, single	7492056
25.	1	working head, single flex.	7492050
26.	1	working head, single bent	7492062
27.	1	working head, twice	7492063
28.	1	working head, twice flex.	7492051
29.	1	admission tooth clutch	7493021
30.	1	admission semiccicular	7493016
31.	1	universal adapter	7493019
32.	1	admission, working surface	7493026
33.	1	admission incl. brush	7493014

description	size	weigth	Article	euro
cleaning set	1260 x 430 x 210 mm	11,6 kg	7492104	on request

cleaning set dry/wet cleaning combination

- for cleaning of indoor and outdoor installations up to 36 kVfor dry- and wet cleaning
- pinning clutch system for quick re-equiping of the work heads dry cleaning
- tooth clutch system for quick re-equipping and bending of the wet cleaning heads
- storage case for transporting and in accordance with stroring of the equipment parts
- with coam insets in the ground and top part, because of that a damage of the insulation tubes while the storage will be prevented
- the used special cleaning liquid is to choose in accordance with the determination voltage
- specially adjusted work heads(for intensive cleaning)
- delivery in special plastic case with supply according to the following list
- other supplies are avialable on request
- do not use during rainfall!

standard equipped:

01.	1	storage bag	7492013
02.	1	vacuum tube with handle	7480012
03.	2	extension, 200 mm	7480013
04.	2	extension, 400 mm	7480014
05.	1	extension, 800 mm	7480015
06.	1	vacuum tube angle 45°	7480018
07.	1	vacuum tube angle 90°	7480017
08.	1	nozzle 60	7480024
09.	1	nozzle 60 long	7480091
10.	1	nozzle 110	7480023
11.	1	nozzle 210	7480026
12.	1	tubular brush, bristles cylindrical	7480038
13.	1	tubular brush, bristle conical	7480039
14.	1	vacuum tube adapter	7480089
15.	1	tubular brush, 250 mm	7480022
16.	1	tubular brush without head	7480300
17.	1	brush bent	7480037
18.	1	Isulated mirror	7480025
19.	1	vacuum hose abapter	7480041
20.	1	hygro-thermometer	7480029
21.	1	cleaning brush 40 mm	7480060
22.	1	cleaning brush 25 mm	7480500
23.	1	adapter dry - wet	7480036
24.	1	working head, single	7492056
25.	1	working head, single flex.	7492050
26.	1	working head, single bent	7492062
27.	1	working head, twice	7492063
28.	1	working head, twice flex.	7492051
29.	1	admission tooth clutch	7493021
30.	1	admission semiccicular	7493016
31.	1	unversal adapter	7493019
32.	1	admission, working surface	7493026
33.	1	admission incl. brush	7493014

36 kV

description	size	weigth	Article	euro
combination set 36 kV	1260 x 430 x 210 mm	17 kg	7492102	on request
storage case, combination set	1260 x 430 x 210 mm	11,2 kg	7492103	on request

handle wet cleaning up to 36 kV

- for wet cleaning
- as operation stick with handle, unscrewable
- boundary disc, insulation part, red ring and extension part
- divisible, with handle
- ø 30 mm, whole length 1300 mm

36 kV

description	size	weigth	Article	euro
handle	1275 mm	820 g	7492002	on request

extension wet cleaning up to 36 kV

- GFK-insulation tube, on both sides universal tooth clutch
- diameter: 20 mm

36 kV

description	size	weigth	Article	euro
extension	200 mm	100 g	7492003	on request
extension	300 mm	130 g	7492004	on request
extension	400 mm	170 g	7492005	on request
extension	800 mm	320 g	7492082	on request

working heads wet cleaning

- for admission of cleaning sponges
- diameter: 20 mm
- sponges will be put on the working heads

36 kV

description	size	weigth	Article	euro
work head, inflexible	265 mm	115 g	7492056	on request
work head, flexible	265 mm	105 g	7492050	on request
work head, inflexible bent	265 mm	115 g	7492062	on request
	265 mm	190 g	7492063	on request
work head, twice flexibel	265 mm	180 g	7492051	on request

admission for sponge, Velcro fastener 80x60 mm moveable

- rectangular version
- admission with tooth clutch- or screw clutch part
- well handling possible
- very stabil version
- sponges will be fixed with Velcro fastener
- length 170 mm

36 kV

description	size	weigth	Article	euro
admission screw clutch	205 mm	120 g	7493020	on request
admission tooth clutch	205 mm	135 g	7493021	on request

admission semicicular 150x30 mm,m. vol., for Velcro sponge

- semicicular admission with tooth clutch part
- well handling possible
- very stabil version
- will be favoured for cleaning of horizontal ordered insulators
- depressions at plastic insulators can be excellently cleaned by the special form

36 kV

description	size	weigth	Article	euro
admission 150 x 30	150 x 30 mm	175 g	7493016	on request

admission for working surface,m. vol., with Velcro fastener

- admission with tooth (tc)- or screw clutch (sc) possible
- admission incl. working surface 70 x 50 mm oder 70 x 30mm
- working surface changeable
- working surface out of tough, springy plastic, because of that a breaking is almost impossible
- length 150 mm
- for sponges 150 x 30/60 mm, or plastic rub fleece for switching revision
- sponges will be fixed by Velcro fastener

36 kV

description	size	weigth	Article	euro
admission tc, working surface	70 x 30 mm	115 g	7493026	on request
admission sc, working surface	70 x 30 mm	115 g	7493025	on request
admission tc	90 mm	100 g	7493028	on request
admission sc	90 mm	100 g	7493027	on request
admission	70 x 30 mm	15 g	7493030	on request

admission for brush

- admission with tooth clutch(tc) or with screw clutch (sc),
- brush changeable, will be screwed by thread

36 kV

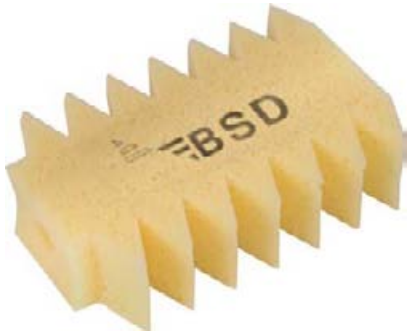
description	size	weigth	Article	euro
admission incl. brush, tc	200 mm	105 g	7493013	on request
admission incl. brush, sc	200 mm	105 g	7493014	on request
admission excl. sponge, tc	90 mm	80 g	7494005	on request
admission excl. sponge, sc	90 mm	80 g	7494025	on request
brush P 4	ø 20 mm	30 g	7494010	on request
brush P 8	ø 30 mm	45 g	7494008	on request

sponge, putting on, medium voltage overhead lines

- for putting on work heads 20 mm
- delivery of 5 pieces

36 kV

description	size	weigth	Article	euro
sponge rectangular	50 x 50 x 150 mm	15 g	7492052	on request
sponge rectangular	40 x 70 x 150 mm	15 g	7492053	on request
sponge rectangular, jagged	40 x 105 x 150 mm	15 g	7492054	on request
sponge triangular, jagged	40 x 105 x 150 mm	15 g	7492055	on request



sponge, Velcro fastener

- soft
- with sponge, Velcro fastener for use in admission 150 x 30 on rather 80 x 30 mm
- 1 VE = 5 pieces

36 kV

description	size	weigth	Article	euro
sponge	150 x 30 x 20 mm	5 g	7492023	on request
sponge	150 x 60 x 20 mm	12 g	7492022	on request

storage bag for sponges

- for carrying or safekeeping of sponges
- made of imitation leather

description	size	weigth	Article	euro
storage bag	500 x 300 x 300 mm	560 g	7480250	on request

adapter tooth-/screw clutch, m. voltage cleaning

- enables the connection with work heads of tooth clutch(tc) to operation handles with screw connection(sc)
- up to 36 kV

36 kV

description	size	weigth	Article	euro
adapter sc/tc	90 mm	70 g	7493022	on request

universal adapter tooth clutch, m. voltage indoor install.

- universal adapter for admission of work heads for example the semicircular admissions 7 493 016 at the operation sticks with tooth clutch
- enables the adjusting of different angles

36 kV

description	size	weigth	Article	euro
universal adapter	135 mm	95 g	7493019	on request

cleaning fluid for wet cleaning up to 36 kV

- for putting on the cleaning sponges of the wet cleaning sets
- for use with spraying lance for switch revision
- voltage strength 25 kV/cm
- Florin 2000, canister
- evaporate residueless

description	size	weigth	Article	euro
Florin 2000		10 l	7490026	on request

cleaning fluid for wet cleaning up to 36 kV

- for putting on the cleaning sponges of the wet cleaning sets
- for use with spraying lance for switch revision
- voltage strength 100 kV/cm
- Rovolta SLX-Top, canister
- evaporate residueless

description	size	weigth	Article	euro
Rivolta SLX-Top	10 l		7490027	on request

cleaning fluid for wet cleaning up to 36 kV

- for putting on the cleaning sponges of the wet cleaning sets
- for use with spraying lance for switch revision
- voltage strength 100 kV/cm
- not flammable, not explosive, no flash point
- Rovolta SLX-500, canister
- evaporate residueless

description	size	weigth	Article	euro
Rivolta SLX-500	4 l		7490028	on request

mobile BSD jumpering system

The mobile BSD jumpering system (ÜBS) is a technical innovation which was developed in co-operation with research (Technische Universität Dresden) and pactice (RWE). The BSD jumpering system is transportable, can be used flexibly and requires only a brief preparation trime on side. Without additonal cost and without switching off loads, after live-line cleaning and maintenance work which has been normal until now in indoor MV switchgear, now additionally the striking and lagging contacts can be maintained, the fuse trip-free mechanism can be tested, and "load-free" switching processes can be carried out during live working.

description	size	weigth	Article	euro
jumpering system switchgear	24 kV/ 200 A	410 kg	7497100	on request
trailing cables	10 m	34 kg	7497010	on request
trailing cables	12 m	39 kg	7497012	on request
protective cap	600 mm	100 g	7497050	on request

traverse (ÜBS)

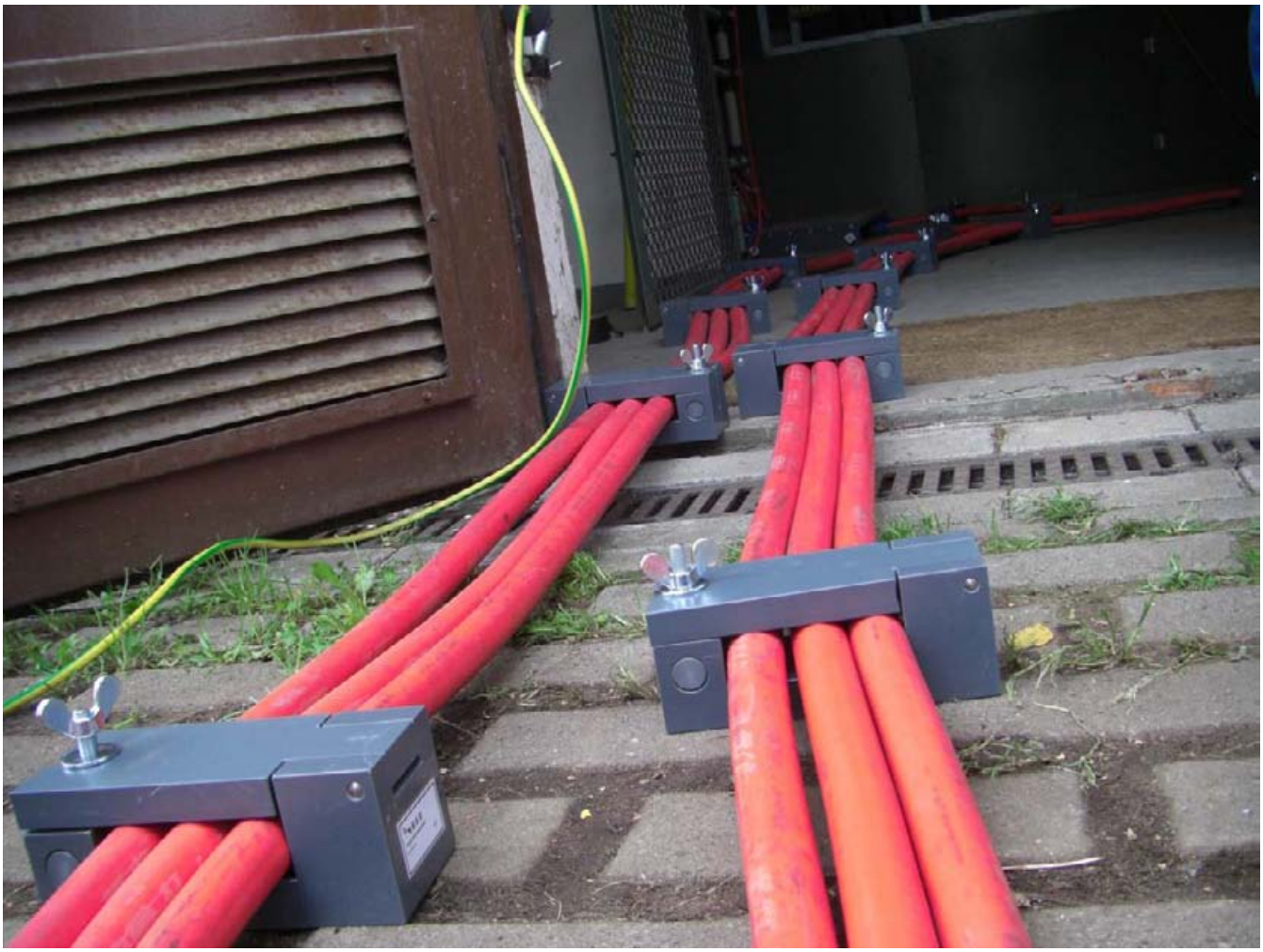
- made of GFK and PVC
- you need two traverses for using the ÜBS
- carries the "parking" trainling cables
- for fixing the trailing cables
- with using the universal holder (7 660 001) you can fast actuation sticks
- two beams across the traverse
- removeable

description	size	weigth	Article	euro
traverse (ÜBS)	1300 mm	27 kg	7497400	on request

screwing elements (ÜBS)

- made of PVC
- openable
- fast growing with butterfly nut
- for bundling up the trailing cables

description	size	weigth	Article	euro
screwing elements (ÜBS)	3 x 70 mm²	320 g	7497300	on request



screw head terminal (ÜBS)

- for fasting on screwed connections in medium voltage systems
- carrying capacity up to 250 A
- made of steel

description	size	weigth	Article	euro
screw head terminal	24 kV	1,1 kg	7497140	on request
suitcase	470 x 370 x 200 mm	1,2 kg	7497115	on request

busbar terminal (ÜBS)

- for fasting the busbars in medium voltage systems
- carrying capacity up to 250 A
- made of steel

description	size	weigth	Article	euro
busbar terminal	24 kV/ 250 A	1,4 kg	7497120	on request
matrix busbar terminal	24 kV	50 g	7497121	on request
suitcase	470 x 370 x 200 mm	1,2 kg	7497116	on request

thoothed terminal (ÜBS)

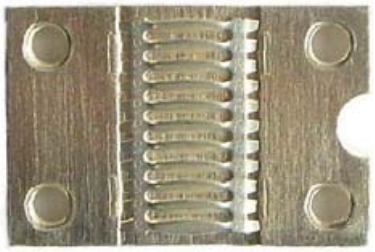
- for connecting crimping cable lugs with a wide of 150 mm²
- carrying capacity up to 250 A
- made of steel

description	size	weigth	Article	euro
thoothed terminal	150 qmm	1,3 kg	7497110	on request
matrix thoothed terminal	150 qmm	30 g	7497111	on request
suitcase	470 x 370 x 200 mm	1,2 kg	7497115	on request

striking contact terminal, small (ÜBS)

- up to 30 mm wide striking contacts
- opening wide 5 mm
- carrying capacity up to 250 A
- made of steel

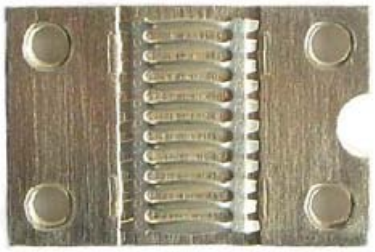
description	size	weigth	Article	euro
striking contact terminal, small	24 kV/ 250 A	1,0 kg	7497130	on request
matrix striking contact terminal	24 kV	40 g	7497161	on request
suitcase	470 x 370 x 200 mm	1,2 kg	7497115	on request



striking contact terminals (ÜBS)

- up to 30 mm wide strinking contacts
- opening wide 7 mm
- carrying capacity up to 250 A
- made of steel

description	size	weigth	Article	euro
striking contact terminal	24 kV/ 250 A	1,0 kg	7497160	on request
matrix striking contact terminal	24 kV	40 g	7497161	on request
suitcase	470 x 370 x 200 mm	1,2 kg	7497115	on request



actuation stick bayonet (ÜBS)

- for fasting the terminals and trailing cables
- working head explaint like a bayonet
- end of actuation stick equipped with a four-sided-drive for fasting the trailing cables and terminals with a torgue-wrench

24 kV

description	rated voltage	lg	li	lh	lv	Article	euro
actuation stick bayonet	24 kV	1500 mm	525mm			7497250	on request

actuation stick, size 25 (ÜBS)

- for fasting the terminals
- working head explaint with a four-sided-drive
- four-sided-drive changeable
- end of actuation stick equipped with a 1/2 inch four-sided-drive for fasting the trailing cables and terminals with a torgue-wrench
- 30 mm fiberglass

24 kV

description	rated voltage	lg	li	lh	lv	Article	euro
actuation stick, size 25	24 kV	1500 mm	525 mm			7497260	on request

six-side-adaptor (ÜBS)

- for fasting strinking contact terminals
- with "stick spindle" for fasting with the actuation stick bayonet

24 kV

description	size	weigth	Article	euro
six-side-adaptor	SW 5	130 g	7497350	on request

paint layer remover (ÜBS)

- for removing paint layer
- 30 mm fiberglass
- color: blau
- length: 1,7 m

24 kV

description	size	weigth	Article	euro
paint layer remover	24 kV	4,3 kg	7497500	on request
head / paint layer remover	24 kV	0,8 kg	7497550	on request
supplier unit		1,3 kg	7497580	on request

blowing out set up to 36 kV

- to loosen difficult to operate mechanical switch- on rather transmission mechanism
- it enables the spraying out of mechanical switch- on rather transmission mechanism trought the spraying lance and voltage strenght cleaning liquid
- cleaning liquid looses oils and fats and also resin
- after that the set enables to blow out the switching angle with a pressure of 0 - 10 bar
- with the spraying lance the switching angle will be threated again with voltage strength lubricant
- in connection with insulating work heads the wet cleaning sets can clean all dirty parts wet
- as propellant will be used nitrogen, botles up to 20 l/ 300 bar
- the set consists of:

01.	1	supplying unit		7600000
02.	1	pressure gauge	300 bar	7610300
03.	1	blowing lance	1,70 m	7602000
04.	1	lance putting on end for blowing lance	300 mm	7602500
05.	1	spraying lance	1,70 m	7601000
06.	1	oiler	1,70 m	7480032
07.	1	dirt catcher		7650000
08.	1	operation stick	1,50 m	7480052
09.	1	extension	0,50 m	7650500
10.	2	storing bag	1,60 m	7480090

36 kV

description	size	weigth	Article	euro
blowing out set			7603000	on request

supplying device

- mobile device out of PVC
- for gas botles up to 20 l/ 300 bar
- connectings for für 3 different lances, pressure 0 - 10 bar adjustable
- delivery incl. 3 x 5 m spiral hoses
- without pressure gauge and nitrogen-botle

description	size	weigth	Article	euro
supplying device	65 x 45 x 120 cm	18 kg	7600000	on request

pressure gauge

- for nitrogen
- fitting to all common gas botles
- outlet 0 - 16 bar

description	size	weigth	Article	euro
pressure gauge	200 bar	1,6 kg	7610200	on request
pressure gauge	300 bar	1,7 kg	7610300	on request

spraying lance switch revision up to 36 kV

- for spraying out and lubrication of mechanical switching- on rather transmission mechanism
- fitting to the supplying device
- it's recommended to use for spraying of the cleaning liquid and for the lubricant 2 separate spraying lances
- proofed up to 36 kV
- delivery incl. lance top part 300 mm, container and lid
- spraying lance 1,7 m will be favoured for 10 kV installations
- spraying lance 2,2 m will be favoured for 20 kV installations

36 kV

description	size	weigth	Article	euro
spraying lance	1,7 m	2,1 kg	7601000	on request

extension spraying lance

- for extending the spraying lance up to 300 mm

description	size	weigth	Article	euro
extension spraying lance	300 mm	400 g	7601010	on request

lance top part for spraying lance

- movable in all directions
- with integrated hose and nozzle
- the cleaning liquid will be sprayed by the nozzle
- proofed up to 36 kV

36 kV

description	size	weigth	Article	euro
lance top part	300 mm	50 g	7601500	on request

nozzle for spraying lance

- fitting to the lance top part of the spraying lance

description	size	weigth	Article	euro
nozzle for spraying lance	20 mm	20 g	7601600	on request

container for spraying lance

- out of PVC
- serves for admission of the cleaning liquid, for spraying the switching angles
- delivery without lid
- lid serves for screwing the container for transporting

description	size	weigth	Article	euro
container	300 ml	450 g	7601700	on request
lid for container	10 x 10 cm	200 g	7601701	on request

blowing out lance switch revision up to 36 kV

- for blowing out of mechanical switching- on rather transmission mechanism
- fitting to the supplying device
- proofed up to 36 kV
- spraying lance 1,7 m will be favoured for 10 kV installations
- spraying lance 2,2 m will be favoured for 20 kV installations
- delivery incl. lance top part

36 kV

description	size	weigth	Article	euro
blowing out lance	1,7 m	2,0 kg	7602000	on request

extension blowing out lance

- for extending the blowing out lance up to 300 mm

description	size	weigth	Article	euro
extension blowing out lance	300 mm	400 g	7602010	on request

lance top part for blowing out lance

- movable in all directions
- proofed up to 36 kV

36 kV

description	size	weigth	Article	euro
lance top part	300 mm	50 g	7602500	on request

oiler switching revision up to 36 kV

- proofed up to 36 kV
- in connection with the switch maintenance it's possible to lubricate the switch joint
- in connection with voltage strength lubriant for example Rivolta SKD16
- oiler 1,7 m will be favoured for 10 kV installations
- oiler 2,2 m will be favoured for 20 kV installations

36 kV

description	size	weigth	Article	euro
oiler	1,7 m	2,0 kg	7480032	on request

extension oiler for switching revision

- for extending the oiler for switching devision of the length of 2m

description	size	weigth	Article	euro
	300 mm	400 g	7603010	on request

lance top part for oiler, m. voltage-service up to 36 kV

- movable in all directions
- with on the inside lying hose that prevents a high driping after of the lubricant
- proofed up to 36 kV

36 kV

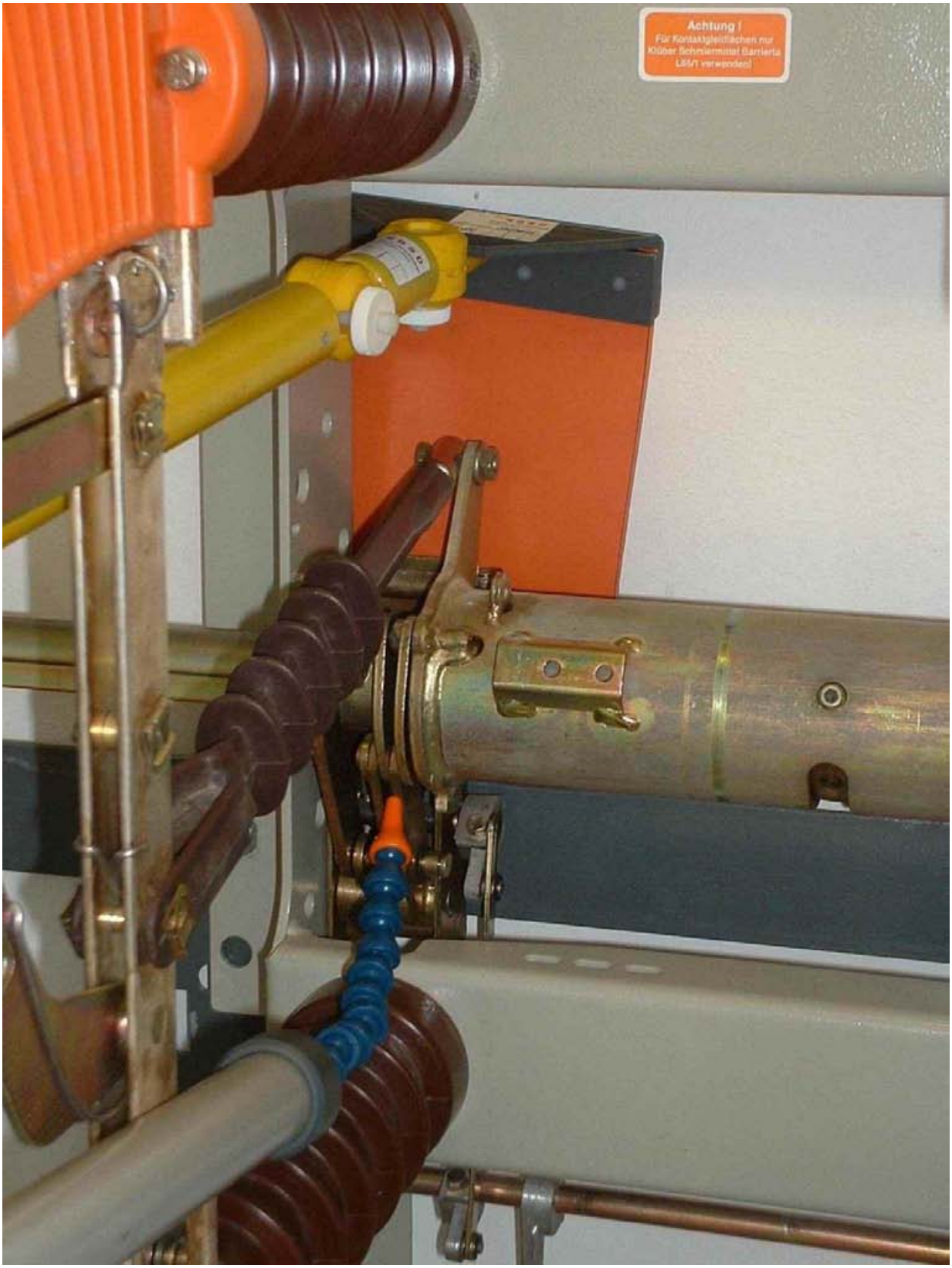
description	size	weigth	Article	euro
lance top part, oiler	300 mm		7480233	on request

dirt catcher for switch revision, m. voltage

- for positioning for blowing out ofwitching- on rather transmission mechanism
- therefore won't be polluted the surrounding installation parts unnecessarily
- with the holding 7 493 019 the dirt catcher can be attached to the operation stick Nr. 7 480 052 and the extension
- proofed up to 36 kV

36 kV

description	size	weigth	Article	euro
dirt catcher	150 x 250 mm	300 g	7650000	on request



operation stick work heads, m. voltage indoor

- with universal tooth clutch
- therefore is a use of all common lockings in connection with a six-sided admission Art-Nr. 7 480 050 possible

36 kV

description	size	weigth	Article	euro
operation stick	1,5 m	1,5 kg	7480052	on request
operation stick	2,0 m	1,8 kg	7480056	on request
extension	0,5 m	0,5 kg	7650500	on request
extension	1,0 m	1,0 kg	7480054	on request

storage bag medium voltage handles

- fitting to blowing out lance, sprayer, oiler, operation stick and extension
- fitting for 2 devices for example blowing out lance and sprayer

description	size	weigth	Article	euro
storage bag	1,60 m	300 g	7480090	on request
storage bag	2,20 m	400 g	7480095	on request

locking for hurry after contacts

- in connection with standing traverse Nr. 7 660 401 and universal holding Nr. 7 660 001 for locking of opened hurry after contacts at service
- proofed up to 36 kV

36 kV

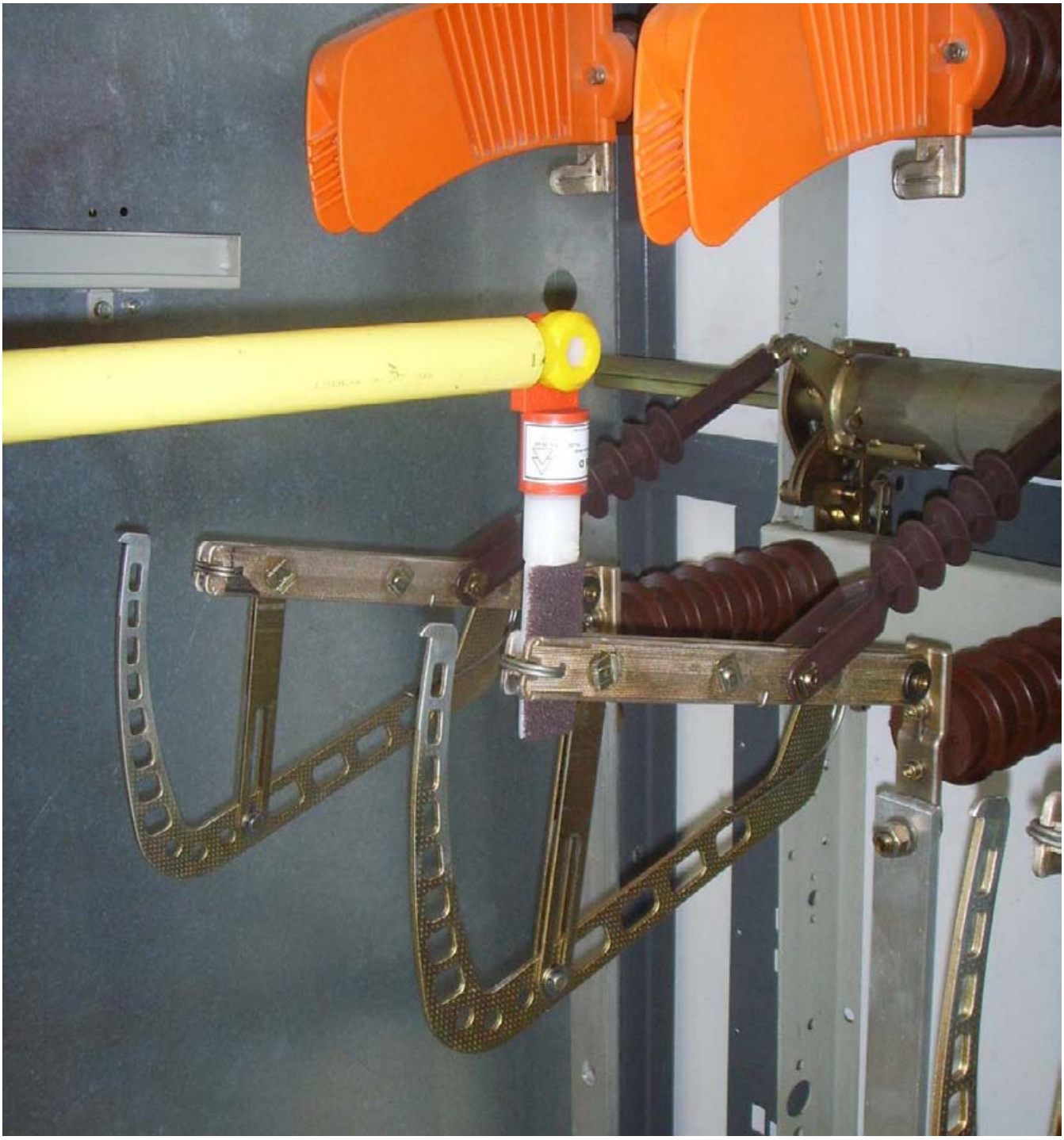
description	size	weigth	Article	euro
locking for hurry after contacts	1,5 m		7660003	on request

admission for working surface, extra thin

- admission with tooth clutch
- working surface 70 x 30 mm incl. rub flleece 7 mm
- working surface changeable
- length 150 mm

36 kV

description	size	weigth	Article	euro
admission for working surface	70 x 30 mm	110 g	7493040	on request
admission without working surface	90 mm	85 g	7493060	on request
working surface / rub fleece	70 x 30 mm	25 g	7493050	on request



rubbing fleece with Velcro fastener

- rubbing fleece
- with Velcro fastener for use in admission

36 kV

description	size	weigth	Article	euro
rubbing fleece	70 x 30 mm	6 g	7492123	on request

lubricant switch revision up to 36 kV

- fully synthetic performance lubricant
- servers for lubricating of switch- and transmission mechanism of medium voltage switching devices
- will be brought in drops by oiler to the relevant areas
- very good crowling effect, viscosity like honey
- voltage strength 44 kV/ 2,5 mm
- Rivolta S.K.D.170

description	size	weigth	Article	euro
lubricant SKD170	10 l		7490031	on request

lubricant switch revision up to 36 kV

- fully synthetic performance lubricant
- servers for lubricating of switch- and transmission mechanism of medium voltage switching devices
- will be brought in drops by oiler to the relevant areas
- very good crowling effect, viscosity like honey
- voltage strength 44 kV/ 2,5 mm
- Rivolta S.K.D.16

description	size	weigth	Article	euro
lubricant SKD16	10 l		7490029	on request

grease for lubricating striking contacts up to 36 kV

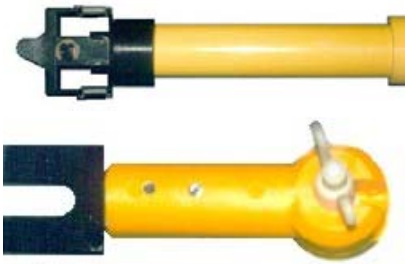
- serves for lubricating of striking contacts of medium voltage switching devices
- will be applied by a sponge to the striking contacts
- trough the large temprature range almost universally usable
- Rivolta S.K.D.5002
- tube content: 100g

description	size	weigth	Article	euro
grease SKD	800 g		7490030	on request

locking stick LHTCI

- locking of load dividing switches LHTCI in BSIG-cells for cleaning up to 36 kV
- in connection with operation stick Art-Nr. 7 480 052 for reseting the spring help memory of the load dividing switches LHTCI
- for cleaning up to 36 kV

description	size	weigth	Article	euro
locking stick up to 36 kV	1,56 m	3,5 kg	7480001	on request
getting back cradle up to 36 kV	160 mm	250 g	7480002	on request
storage bag	1,60 m	0,3 kg	7480090	on request



locking for load dividing switch H 22

- for locking of the load dividing-/transformer switch of the company Driescher-Moosburg H22
- for switches 10 kV on rather 20 kV
- in connection with the operation stick Art-Nr. 7 480 052 and adapter with six-sided admission Art-Nr. 7 480 050 usable
- delivery without adapter six-sided admission Art-Nr. 7 480 050

description	size	weigth	Article	euro
locking H22	36 kV	800 g	7480003	on request

locking for load dividing switch L-TRI

- for locking of the load dividing-/transformer switch of the company Alstrom
- for switches 10 kV on rather 20 kV
- in connection with the operation stick Art-Nr. 7 480 052 and adapter with six-sided admission Art-Nr. 7 480 050 usable
- proofed up to 36 kV

description	size	weigth	Article	euro
locking L-TRI	36 kV	800 g	7480034	on request

locking for load dividing switch LDTC

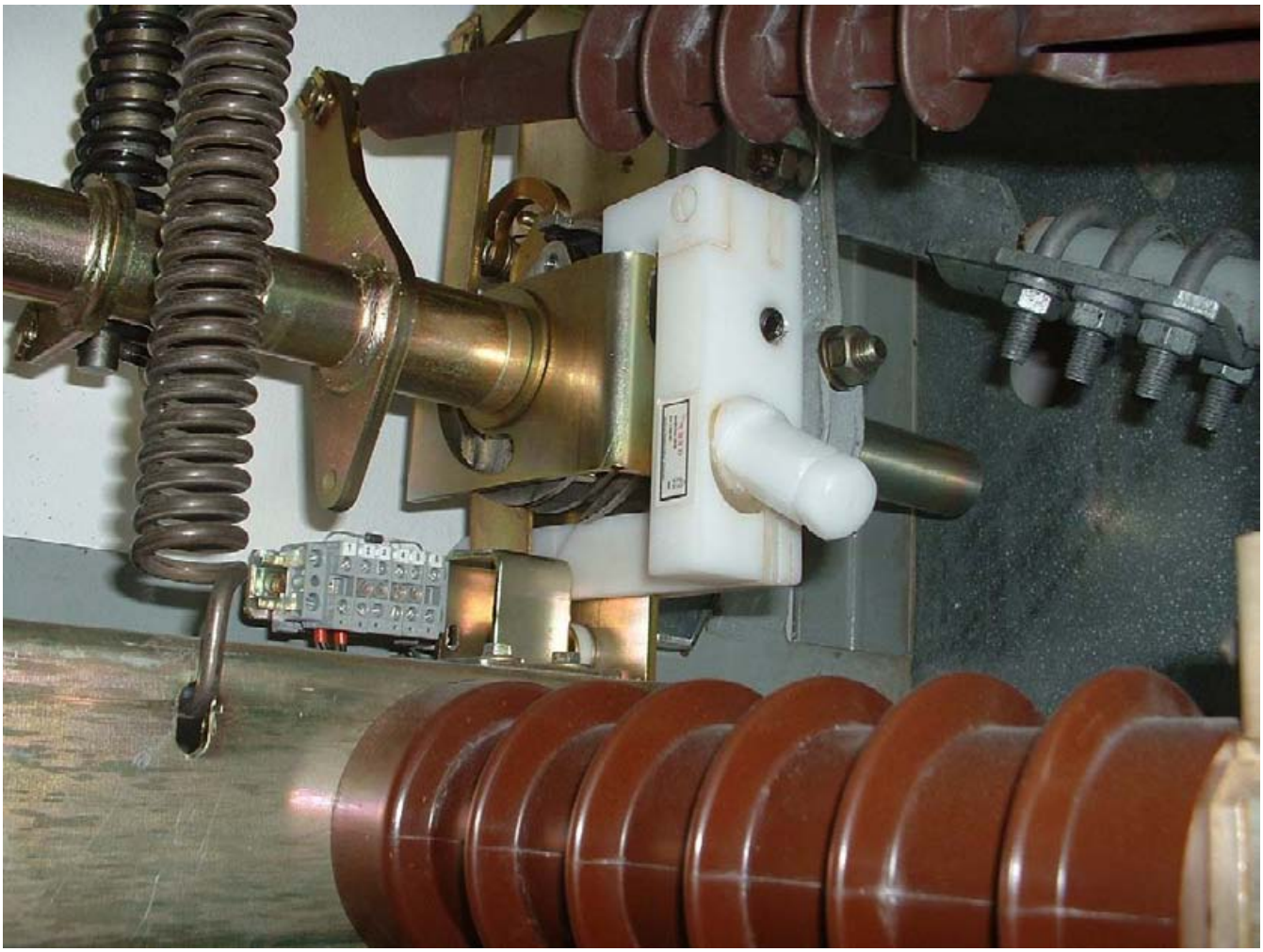
- for locking of the load dividing-/transformer switch LDTC of the company Driescher-Wegberg
- for switches 20 kV
- in connection with the operation stick Art-Nr. 7 480 052 and adapter with six-sided admission Art-Nr. 7 480 050 or a relevant switching stick with six-sided clutch usable
- proofed up to 36 kV

description	size	weigth	Article	euro
locking	140 x 60 x 50 mm	350 g	7480033	on request

locking for load dividing switch LDTM

- for locking of the load dividing-/transformer switch LDTM of the company Driescher-Wegberg
- use of the locking by operation stick in connection with adapter with six-sided admission

description	size	weigth	Article	euro
locking LDTM	36 kV	800 g	7480053	on request



locking for load dividing switch AL 404/ 24 kV

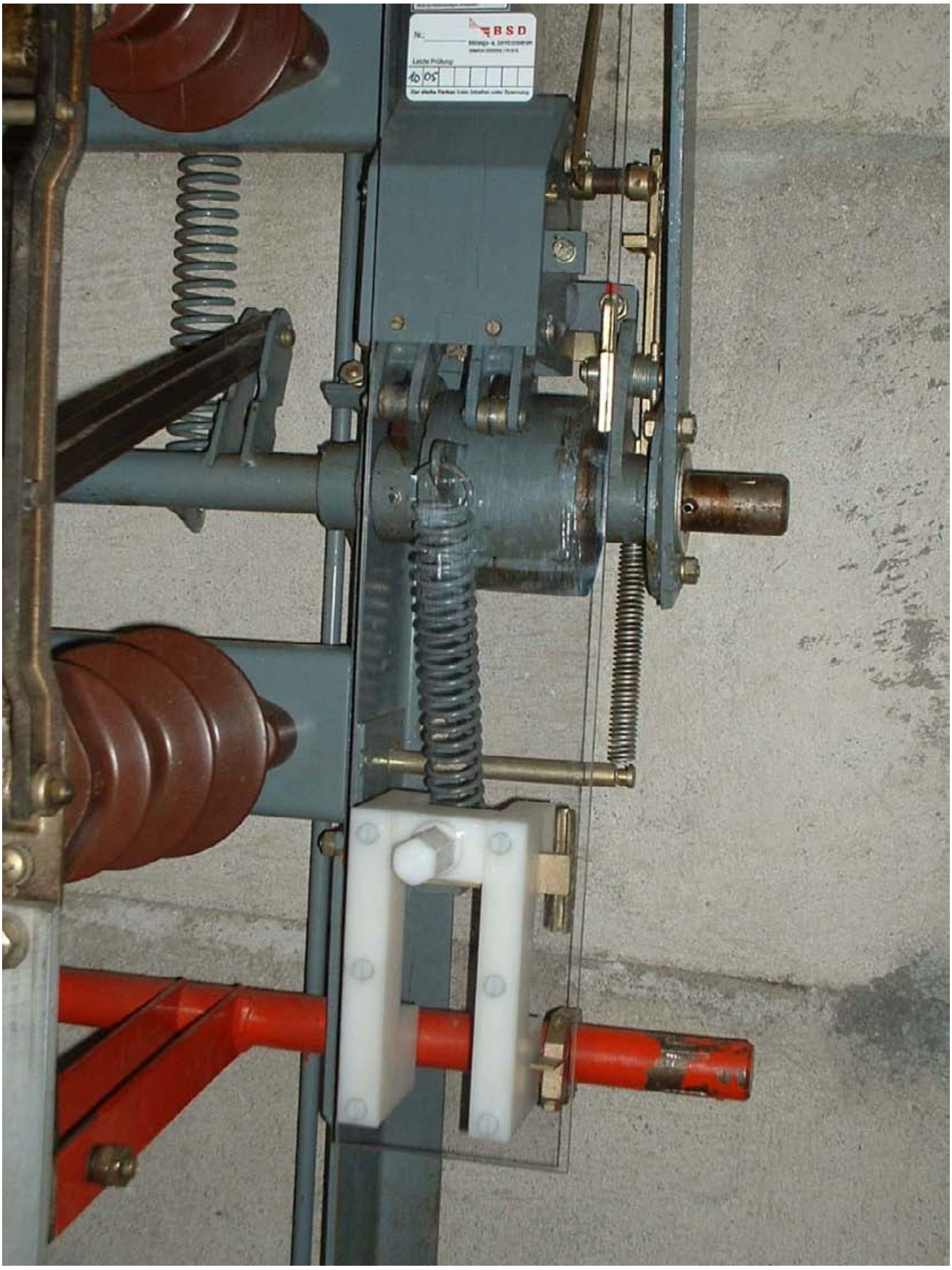
- BGV A3, VDE 0105/100
- designed and proofed for use up to a nominal voltage 24 kV
- can only be used by handle Art.-Nr. 7 480 052, with six-sided admission Art.-Nr. 7 480 050

description	size	weigth	Article	euro
locking AL 404			7480061	on request

cover Sachsenwerk

- serves for locking of the Sachsenwerk-transformer load dividing switch AL 404/ 24 kV
- designed and proofed for use up to a nominal voltage 24 kV
- can only be used with handle Art.-Nr. 7 480 052, with six-sided admission Art.-Nr. 7 480 050
- the attaching of the locking can only be occured by therefore trained electrical qualified employee

description	size	weigth	Article	euro
cover		400 g	7480062	on request



six-sided adapter SW 5

- for fixing of the locking of the load dividing-/transformer switch LDTC of the company Driescher-Wegberg

36 kV

description	size	weigth	Article	euro
six-sided adapter SW 5	SW 5	120 g	7480051	on request

adapter with six-sided admission, m. voltage-cleaning

- for use of different equipment with six-sided connecting for example locking H22, LDTC, LDTM, L-TRI, cover L-TRI, as well as the six-sided adapter SW 5
- six-sided admission SW 20 for use of the equipment
- tooth clutch for fixing to the operation stick on rather extension

36 kV

description	size	weigth	Article	euro
adapter with six-sided admission	SW 20	200 g	7480050	on request

refilling device medium voltage

- E DIN VDE part 621 and DIN VDE 0681 part 1
- equipment for refilling of heated HT-mass for wet cable end fastenings
- for nominal voltage up to 36 kV
- pumping device with container
- isolating refilling lance
- all componets on transport carriage
- supply: 230 V 7 50 Hz
- nominal voltage: 90 W
- container size: 5 l
- regulation range heating: 0...120°C
- display range of the temperature meassuring: 0...120°C

- refilling lance extended to 110 cm !

36 kV

description	size	weigth	Article	euro
refilling device medium voltage	bis 36 kV	17,6 kg	7495000	on request
replacement container	320 x 165 x 164 mm	2,7 kg	7495015	on request

screw driver set for refilling device

- for unscrewing /screwing on of locking screws at cable end fastenings
- according to DIN VDE 0681 part 1
- for nominal voltages up to 36 kV

screw driver set complete with case consists of:

- operation stick with turn grip, diameter: 30 mm
- straight extension, diameter: 30 mm, length 350 mm
- extension 70°, diameter 30 mm
- work head straigth, diameter: 30 mm
- work head 30° bent, diameter: 30 mm
- work head 70° bent, diameter: 30 mm
- special-bit 13 mm, fitting to work heads Nr. 3 - 5
- special-bit 8 mm, fitting to work heads Nr. 3 - 5
- plastic case, dimensions: 1130 x 200 x 120 mm
- selection special locking-screws

36 kV

description	size	weigth	Article	euro
		4,57	7495001	on request

actuation stick for screw driver set

- actuation stick with swivelling clutch

36 kV

description	size	weigth	Article	euro
actuation stick		709 g	7495002	on request

extension straight for screw driver set

- 30 mm diameter
- length: 350 mm
- straight

36 kV

description	size	weigth	Article	euro
extension	350 mm	325 g	7495020	on request

extension 70° for screw driver set

- 30 mm diameter
- length: 350 mm
- 70° bent

36 kV

description	size	weigth	Article	euro
extension		295 g	7495010	on request

working head straight for screw driver-set

- 30 mm diameter
- straight

36 kV

description	size	weigth	Article	euro
working head		291 g	7495003	on request

working head 30° for screw driver-set

- 30 mm diameter
- 30° bent

36 kV

description	size	weigth	Article	euro
working head		293 g	7495004	on request

working head 70° for screw driver-set

- 30 mm diameter
- 70° bent

36 kV

description	size	weigth	Article	euro
working head		292 g	7495005	on request

special-bits for screw driver set

- both bits are matching with working heads straight, 30° and 70°

36 kV

description	size	weigth	Article	euro
		21 g	7495006	on request
		17 g	7495007	on request

plastic carrying for screw driver set, empty

- size: 1130 x 200 x 120 mm

description	size	weigth	Article	euro
plastic carrying		2,85 kg	7495008	on request

special locking screws 36 kV

- for updating by refilling of wet end fastenings
- screws can be reused in connection with the screw driver set
- with sealing ring
- for 10 and 20 kV end fastenings
- for other end fastenings avialable on request
- up to 36 kV

36 kV

description	size	weigth	Article	euro
screw F&G	M22		7495009	on request
screw Köttgen	M10		7495016	on request
screw Raychem	M14		7495017	on request
screw GOW	M12		7495018	on request
screw Kabelrheydt	M8		7495019	on request

drilling device for updating of locking screws

- up to 36 kV
- drilling device serves for drilling into plastic pistons of the wet end fastenings by special rubed drills, drilling into in one operation stage
- changeable work heads
- continuously variable adjustable drill- and mortising deep
- will be drived by 230 V dilling machine
- handle out of glass-fibre strength tube with inside lying shaft
- suitable for 10 and 20 kV end fastenings
- delivery incl. drilling machine, drill, spot facer without thread cutting stick and screw tap
- M10 thread will be brought in by hand and relevant thread cutting stick
- thread cutting stick incl. screw tap
- thread cutting stick out of glass-fibre strength insuation tube up to 36 kV
- cutting deep continuously variable adjustable

36 kV

description	lenght	weigth	Article	euro
drilling device	1,50 m	2,8 kg	7492057	on request
drill 8,5 mm		0,1 kg	7492058	on request
spot facer 15 mm		0,1 kg	7492059	on request
thread cutting stick	1,50 m	1,5 kg	7492060	on request
screw tap M10		0,1 kg	7492061	on request

Assembly tools

Assembly tools

Cable more loeter protects

cable solder umbrella 2 m

- coloured olive, subdivided into 10 sections
- water-proofed and rot hindering impregnated
- by 2,50 m cotton fabric ca. 200 g/m² and 3,0 m, cotton fabric ca. 300 g/m²
- folding-function enables to fork off the umbrella
- earthing spike size 1 for umbrella 2,0 m
  size 2 for umbrella 2,5 m
  size 3 for umbrella 3,0 m

description	diameter	weigth	Article	euro
cable solder umbrella	2 m	3,3 kg	8101000	132,14
cable solder umbrella	2,5 m	9,3 kg	8101250	313,43
cable solder umbrella	3,0 m	11,0 kg	8101300	336,74
earthing spike size 1			8101001	29,00
earthing spike size 2			8101002	33,18
earthing spike size 3			8101003	38,75

Cable of loeter tents

cable solder tent with steel tube frame

- on both sides PVC-coated PES-fabric
- ca. 600 g/m², rot resistant
- steel tube frame 27/2 mm grey painted, foldable
- colour white with circulating warning strip

description	size	weigth	Article	euro
cable solder tent	200x200x200 cm	43 kg	8102200	675,39
cable solder tent	250x250x190 cm	47 kg	8102250	778,54
cable solder tent	300x250x190 cm	53 kg	8102300	803,84

cable solder tent steel tube frame

- 7-part stell tube frame galvanized
- very robust design, frame can be bent back after deformation in construction
  site use
- simple assembly through disturbtion free pinning gadgets
- putting up width is adjustable, because the front parts are connected
  revolving in the highest point and the tarpaulin parts are overlap each other
- on both sides PVC-coated PES-fabric
- ca. 600 g/m², rot resistant

description	size	weigth	Article	euro
cable solder tent	250x200x200	60 kg	8102000	707,22

assembly tent 5-seconds tent

- small, manageable, well stowable
- assembling and dismantling in seconds by only one person
- well thought-out, self supportive construction - no loose sticks
- non-fading for electrical work, installation of fiber-optic cable, maintenance of telecommunication installations
- won't be heavier through rainfall
- rain-/coldness protection
- simple cleaning with high pressure cleaner
- light and robust solution

The assembly tent be suitable idle for the diverse actions of work, for example at switch- and control boxes, sleeves assembly, for ground- and conductor work, waste water pumps and inspections, sewer and road construction work

The assembly tents are avialable in two standard- basic forms:
tapered roof (PZ) and flat roof (5S)
The flat roof type is avialable as cube - and cuboid version in different measurements

The tarped roof tents have in the back in standard an extra zip, which enables to cover a greater working space by opening und putting on an additional tent. For the flat roof tents with ca. 1m length the additional zip is optionally as special function avialable

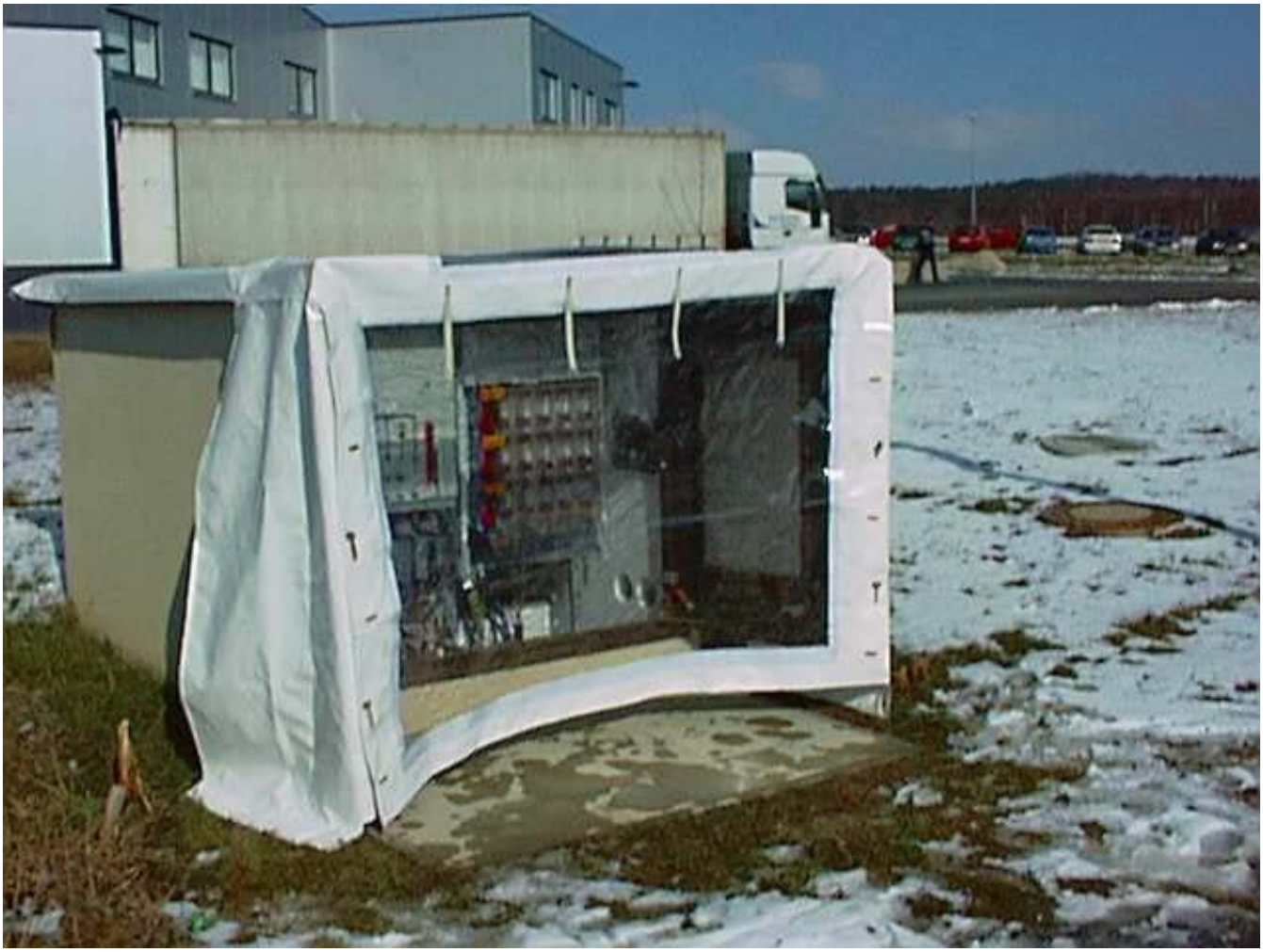
description	width	height	lenght	weigth	Article	euro
assembly tent flat roof	140 cm	150 cm	140 cm		8102140	842,57
assembly tent tapered roof	180 cm	170 cm	180 cm		8102180	626,78
assembly tent flat roof	180 cm	200 cm	180 cm		8102181	975,32
assembly tent flat roof	180 cm	200 cm	250 cm		8102182	1200,95
assembly tent flat roof	210 cm	200 cm	210 cm		8102210	1200,95
assembly tent tapered roof	200 cm	190 cm	250 cm		8102252	852,43
assembly tent flat roof	250 cm	200 cm	250 cm		8102253	1234,38

assembly tent for mini-compact station

- enables to work at mini-compact station also while rainfall, snowfall,.. because it prevents a penetration of dampness to the medium voltage parts
- simple construction, doors will be used for assembly
- rear spanning made by tightening cable with hooks and eyelets
- universal size suitable for stations of the firms Betonbau, Gröber, Scheidt
- on both sides PVC-coated PES-fabric
- ca. 600 g/m², rot resistant
- door- and celling tarpaulin in the working section are made of transparent tarpaulin
- other sizes are avialable on request

delivery supply:
1x tent tarpaulin with inset out of transparent plastic film
1x tent helping rods, adjustable 2-parts
2x universal-tightening clamps
2x metal stick for side weighting
1x storage bag for tent tarpaulin
1x storage bag for tent rods
1x operating instructions

description	size	weigth	Article	euro
assembly tent	265x220x150 cm	35 kg	8102100	678,95



mass stove

- 8 kW
- gas-cook-heater for heating up of filling mass
- adjustable burner with flame supervision
- Piezo firing
- 1.5 bar propan
- connection G3/8LHa
- incl. filling bucket 15 Ltr.

description	size	weigth	Article	euro
mass stove	8 kW	13 kg	8103000	489,84

mass bucket

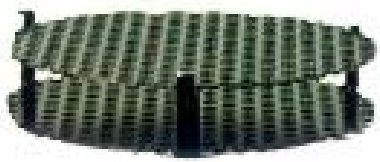
- filling bucket 15 Ltr.
- for inserting in mass stove
- with filling spout

description	size	weigth	Article	euro
mass bucket	15 Ltr.	5,3 kg	8104000	94,67

mass bucket 15 Ltr. riddle inset

- for boiling of rolls (wrap paper)
- height 15 cm

description	size	weigth	Article	euro
	15 Ltr.	5,3 kg	8154100	55,30



mass thermometer

- temperature section 50°C up to 250 °C

description	size	weigth	Article	euro
mass thermometer	140 mm	60 g	8105000	83,98

cable tightening clip

- for alu- or steel/alucable
- independent holding by spring effect
- galvanized

description	cross-section	weigth	Article	euro
cable tightening clip	25 - 35 mm²	0,85 kg	8106040	49,47
cable tightening clip	16 - 70 mm²	1,10 kg	8106041	57,67
cable tightening clip	50 - 150 mm²	1,80 kg	8106042	80,38

cable tightening clip

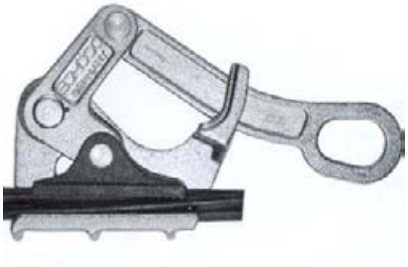
- for copper- and steel cable
- jaws are hardened and brunished

description	cross-section	weigth	Article	euro
cable tightening clip	1 - 16 mm²	0,25 kg	8107050	33,60
cable tightening clip	6 - 35 mm²	0,85 kg	8107051	52,64
cable tightening clip	16 - 70 mm²	1,10 kg	8107052	59,54
cable tightening clip	50 - 150 mm²	1,8 kg	8107053	79,62

cable tightening clip

- for insulating overhead lines
- galvanized
- independent holding
- 2 x 25 -70 mm² bis 4 x 25 -95 + 35 mm²
- diameter 14 - 36 mm

description	diameter	weigth	Article	euro
cable tightening clamps	14 - 36 mm	2,20 kg	8108070	160,23



ISO cable tightening clip

- for insulating overhead lines
- jaws out of aluminium-cast
- for conductor bundle of 4 x 25 x 50
  or 4 x 70 x 95 + 35 mm² (street lightling)

description	diameter	weigth	Article	euro
ISO cable tightening clip	22 - 28 mm	2,20 KG	8150028	352,51
ISO cable tightening clip	32 - 36 mm	2,20 KG	8150036	417,65

pulling out roller with hang edging

- roller out of alu with brass jack
- with closed edging, opening at the side
- with wing nut and strong hang edging
- shine-galvanized
- roll diameter 115 mm bzw. 200 mm

description	diameter	weigth	Article	euro
pulling out roller	bis 16 mm	1,0 kg	8110016	71,87
pulling out roller	bis 29 mm	2,1 kg	8110029	100,42

pulling out roller with revolving load hook

- roller out of alu with brass jack
- instead of hang edging with revolving load hook and safty catch
- roll diameter 115 mm on rather 200 mm

description	diameter	weigth	Article	euro
pulling out roller	bis 16 mm	1,0 kg	8111016	69,77
pulling out roller	bis 29 mm	2,1 kg	8111029	100,93

pulling out roller insulation conductors

- for insulation conductors and conductor bundle
- up to 4 x 95 mm²
- plastic roller

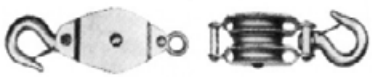
description	diameter	weigth	Article	euro
pulling out roller	bis 50 mm	2,9 kg	8149495	146,32

Bottle/push pull cables

pulley, complete

- with revolving, forged safety hook and hook safety catch
- galvanized, compact steel casing with 3 next to each other laying roller out of plastic (version with brass rolls on request)
- with 20 m hemp rope

description	cable-diameter	roll-diameter	weight-bearing capacity	Article	euro
pulley	6 mm	40 mm	100 kg	8109100	54,11
pulley	8 mm	50 mm	150 kg	8109150	69,78
pulley	10 mm	60 mm	200 kg	8109200	74,65



push pull cable

- simple and proofed operation
- low weight
- load pressure break prevents unintentional sinking of the load
- single rope 175 kg draught
- double rope 350 kg draught

description	size	weigth	Article	euro
push pull cable		2,5 kg	8112350	358,49

push pull cable/universal push pull cable

- for fastening, pulling, lifting and tightening of loads
- for unlimited cable length
- according to accident prevention VBG 8

description	pull-power	Article	euro
universal push pull cable	800 kg	8151080	500,35
universal push pull cable	1600 kg	8151160	683,55

lever pulling device alu

- specially proven for narrowed space circumstances
- low weight and low construction height
- operated by back and forth swiveling of the ratchet lever
- the switching between pulling and sinking take place by one on the ratchet arm attached small lever

standard equipment:

- lever, casing lid and hand wheel out of alu
- casing cast version
- chain activation, the chain will be moved by turning the hand wheel or by pulling at the chain
- transmission with needle bearing, for light run and low effort
- more lifting capacity: possible on request

description	size	weigth	Article	euro
lever pulling device alu	750 kg	9,4 kg	8112750	518,18
lever pulling device alu	1500 kg	16,4 kg	8112150	690,91

Rise iron

climbers

- climbers according to DIN 48345 Post-model
- for wooden poles with variable diameter
- with 3 peaks

description	pylon-diameter	weigth	Article	euro
climbers	90 - 180 mm	3,9 kg	8124180	268,52
climbers	150 - 240 mm	4,2 kg	8124240	238,70
climbers	200 - 300 mm	4,3 kg	8124300	269,45
climbers	230 - 340 mm	4,5 kg	8124340	301,46

cable cleaning brush

- for removing of oxide- and dirt layers form the conductor cables
- worn down brushes can be replaced
- there are different brushes for different cable types
  red brush for : copper cable
  green brush for: aluminium cable

description	cable-diameter	cable	Article	euro
cleaning brush	5 - 24 mm	Aluminium	8140001	62,80
cleaning brush	24 - 42 mm	Aluminium	8140002	41,58
cleaning brush	5 - 24 mm	Kupfer	8140003	62,80
cleaning brush	24 - 42 mm	Kupfer	8140004	41,58

Grounding and short-circuit devices

earthing- and short-circuit device for l.v. overhead lines

- with independent spring clamps
- clamp field 3 - 180 mm diameter
- per clamp 1 Cu-short-circuit cable highly flexible
- PVC-insulated
- cross section 25 mm²

description	Version	Article	euro
short-circuit device	4-polig	8114004	412,55
short-circuit device	5-polig	8114005	499,53
short-circuit device	6-polig	8114006	591,99

earthing- and short-circuit device for privat connection box

consists of:
- 3 short-circuit cartridge size 00
- 1earthing- and short-circuit cable cross section 25 mm²- ESUY
  branch length 3 x 200 mm
  earthing cable length 1 x 300 mm
- 1earthing clamps for attaching to contact busbars up to 12 mm

description	cross-section	weigth	Article	euro
earthing- and short-circuit device	25 mm²	1,0 kg	8149225	312,05

earthing- and short-circuit device for l.v. distribution w.l

consists of:
- 3 short-circuit cartridge size 00
- 1 earthing- and short-circuit cable cross section 25 mm²- ESUY
  branch length, stepped 250/ 500/ 750 mm
  earthing cable length 1 x 500 mm
- 1 earthing clamps for attaching to contact busbars up to 12 mm

description	cross-section	weigth	Article	euro
earthing- and short-circuit device	25 mm²	1,3 kg	8149325	322,19

earthing- and short-circuit device with short-circuit cartri

- operation with NH-put on gripping device

description	size	weigth	Article	euro
earthing- and short-circuit device	25 mm²	2,15 kg	8149025	282,19
earthing- and short-circuit device	35 mm²	2,40 kg	8149035	294,15

earthing- and short-circuit device with short-circuit cartri

- earthing clamp fully insulated with movable hilt
- operation with NH-put on gripping device
- other measurements on request!

description	size	weigth	Article	euro
earthing- and short-circuit device	25 mm²	2,15 kg	8149125	368,22
earthing- and short-circuit device	35 mm²	2,40 kg	8149135	375,35

operation stick

- with ball notch for attaching of the earthing clamp and the connection of the short-circuit parts

description	size	weigth	Article	euro
operation stick		0,15 kg	8149500	54,25

coupling device, connection of 2 low voltage systems

- for operation with NH-put on hilt
- for sizes 1, 2 , 3
- connection cable out of OZONFLEX-rubber
- 1000 mm long

description	cross-section	weigth	Article	euro
coupling device	95 mm²	2,1 kg	8149600	158,02

short-circuit cartridge

- short-circuit cartridge can be connected with one conductor
- can serve for coupling of two low voltage systems

description	size	weigth	Article	euro
short-circuit cartridge		0,25 kg	8149050	44,58

earthing- and short-circuit device with universal-phasescrew

consists of:
- 3 universal- phase screw clamps MT-1921 top
- 1universal earthing clamp MT-840 button
- 1 earthing- and short circuit cable
- branch length 600 mm, earthing cable length 1800 mm

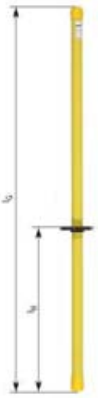
connection possibilities:
- to the phase fixed point T-shaped
- to the phase fixed point ball-shaped 25 mm diameter
- to flat conductor up to 28 mm strength
- to round conductor up to 25 mm diameter
- short circuit cable 120 mm²/earthing cable 50 mm²
- other measurements on request!

description	size	weigth	Article	euro
earthing- and short-circuit device		7,0 kg	8148500	446,29

earthing stick

- earthing stick out of hard-PVC-tube 36 mm diameter with bayonet fitting

description	lenght	weigth	Article	euro
earthing stick	1000 mm	0,6 kg	8148301	65,99
earthing stick	1500 mm	0,8 kg	8148302	75,65



wall mounting

- for admission of device and earthing stick

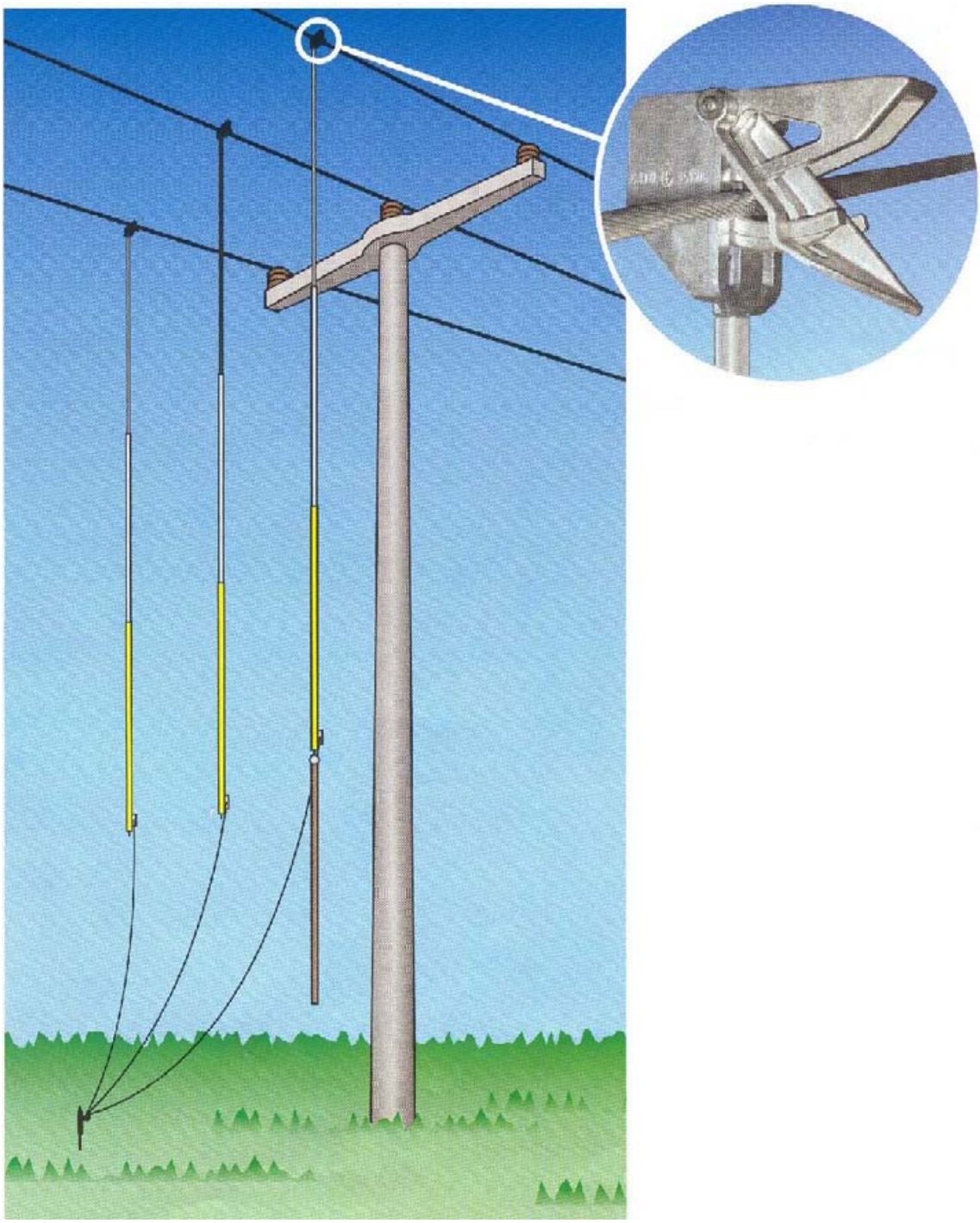
description	size	weigth	Article	euro
wall mounting		1,1 kg	8148400	49,63

earthing- and short-circuit device MT-500-P

MT-500-P earthing- and short-circuit device
to operate from the ground, for 3 phased medium voltage overhead lines
- earthing- and short-circuit device for use at the workplace
- to attache to any place between two poles
- clamps lock automatically by hanging up
- earthing tube good visible by coloured wrap in the under third
- suitable for overhead line heights up to 10,5 m and conductor diameters up to 22 mm
- avialable with short-circuit cable up to 25 mm² or 35 mm²
- short-circuit resistance proofed with kA 1s

normal version complete like described below.
3 telescopic earthing tubes out of special aluminium,
length continuously variable adjustable between 2,25 m and 6 m,
with self locking clamps, round conductors up to 22 mm diameter
3 earthing- and short-circuit cable, highly flexible, transparent wraped,
cross section selectable 25 mm² or 35 mm²,
length 6 m summarized to 1 earthing clamp MT-480
1 stick earther out of forged steel
1 earthing stick out of glass-fibre strenghened polyester tube with special clutch, length 2 m
1 extension stick out of glass-fibre polyester tube
1 case for admission of the earthing tubes, of the stick earther and the earthing- and extension stick

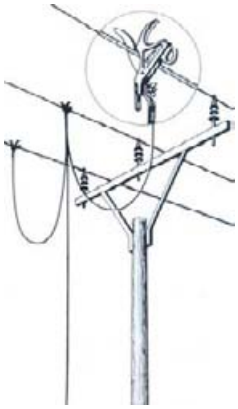
description	cross-section	size	weigth	Article	euro
earthing- and short-circuit device MT-500-P	35 mm²		22,4 kg	8114003	2923,01



earthing- and short-circuit device for 3-phased m.v. oh.l.

- three spring clamps with highly flexible Cu-short-circuit cable PVC-insulated
- one operation stick 2 m able to taken apart
- length of clamp to clamp 2,25 m
- one steel sheet case 425 x 200 x 150
- a carry case for operation stick
- one Cu-earthing cablel, PVC wraped, 16 m long on drum

description	cross-section	Article	euro
earthing- and short-circuit device	25 mm²	8148025	1332,15
earthing- and short-circuit device	35 mm²	8148035	1345,83



Medium voltage of wiring loom working tools

dismantling/stripping tool

- for removing of all insulation layers of cable from 25 mm ø
- adjustable cutting depth 0 - 5 mm
- changeable blade
- suitable for longitudinal- and circle cuts
- replacement blade also for insulating version

description	size	weigth	Article	euro
dismantling/stripping tool	ab 25 mm		8135170	121,23
replacement blade		40 g	8135171	34,44
blade shoe		40 g	8135172	3,12

dismantling/stripping pliers

- for dismantling of PVC-, PE- and VPE-cable mantle
- very simple use, dismantling with a slitting and sheeting
- avialable in different cutting wheel supplies, for the prevailing insulation strength
- PG 3 for cable diameters 26 - 52 mm

description	size	weigth	Article	euro
dismantling/stripping pliers	PG 3		8115000	465,70
replacement blade, round cut			8115001	54,32
replacement blade, longitudinal cut			8115002	54,32

medium voltage case - set

- complete assembly case consists of:
- mantle(coat) cutter GB-M20 with plastic insets
- peeling device GB-P20 with tube of silicone
- universal edge cutter
- six-sided key for knife-edge change
- operating instructions
- transport case with coam insets
- cuts VPE-outside mantles(coats) and insulation layer mantles(coats)
- exact take off of the outside mantle(coat) for 28 mm strength possible
- on round conductors up to diameter of 25 mm
- short-circuit cable 120 mm²/ earthing cable 50 mm²
- other measurements on request!

description	size	weigth	Article	euro
medium voltage case			8152000	1049,23

mantle(coat) cutter GB-M20

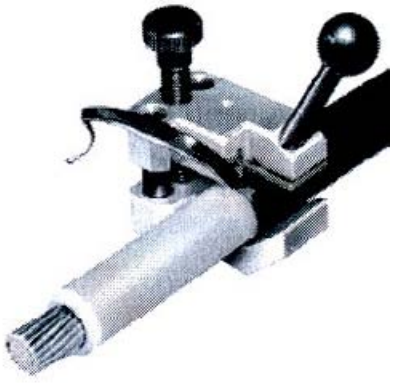
- cuts VPE-outside mantle(coats) and insulation layer mantles(coats)
- exact take off of the outside mantle(coat) possible
- for single conductored cable of 10-30 kV
- between 15 and 50 mm cable diameter

description	size	weigth	Article	euro
mantle(coat) cutter	35 - 500 mm²		8152001	440,62
replacement blade set 5 pieces	10 mm		8153002	194,60

peeling device GB-L10

- peels extruded conduction layer of VPE- medium voltage cable
- special for work on smallest insulation diameters of ca. 20 mm in the section of 10 and 20 kV
- suitable especially in cramped conditions

description	size	weigth	Article	euro
peeling device		200 g	8152200	252,42



peeling device GB-P20

- for controled peeling of the tough extruded outside conduction layers on medium voltage cable with 10 - 30 kV
- working section 10 - 50 mm cable diameters
- with the peeling will be began direct on the cable end, the take off measure is ca. 25 mm
- through simple turning the hand crank around, you can also begin in the middle of the cable, the take off measure is than 10 mm
- consist of hard metal, polished
- peeling depth can be manually adjusted, 0 - 1,2 mm in 0,1 mm steps
- automatic work encourage
- on the end of the peeling operation the circle cut will be reached by simple moving back of the glide jaw

description	size	weigth	Article	euro
peeling device	35 - 500 mm²		8152002	412,39
replacement blade set 5 pieces			8153003	188,16

peeling device, around the cable

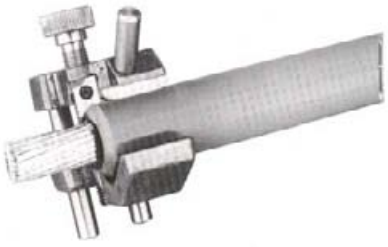
- for peeling the leading layer up to 1,2 mm deep on the outside of cables
- knife adjustable
- can be equipped with a adjustable stopper

description	size	weigth	Article	euro
peeling device		800 g	8152400	511,70

edge cutter GB-KG05-3

- universal edge cutter for touching the taken off VPE-insulation
- variable to use for all standard cross sections of medium voltage cable up to 300 mm²
- working field 15 - 40 mm
- by using the edge cutter the out pushing forces will be reduced to a minimum and a damage of the cable set will be avoided

description	cross-section	size	weigth	Article	euro
edge cutter	bis 300 mm²			8152004	140,11



peeling device for NAKLAY

- peeling device for the Rheydter-Cut on NAKLAY-cabels
- for sheath made of aluminium up to 35 mm diameter

description	size	weigth	Article	euro
peeling device			8118000	556,87

edge breaker 35° for 10-30 kV-cable

- tool for edge breaking
- simple use
- prevents the damage of the cable set

description	size	weigth	Article	euro
edge breaker	16 - 50 mm²		8152010	72,38
edge breaker	70 - 95 mm²		8152020	72,38
edge breaker	120 - 150 mm²		8152030	72,38
edge breaker	185 - 240 mm²		8152040	72,38

Cable shears

cable scissors 600 mm

- low effort through double lever, changeable knife head up to 27 mm ø
- for cable up to 185 mm²

description	cross-section	lenght	Article	euro
cable scissors	27 mm	600 mm	8154601	133,40
replacement head			8154602	92,40

cable scissors 600 mm, wire- and cable scissors

- for copper- and alu cable, wire cable and round steel
- for seperating of overhead lines with strain unload wire/rope
- changeable cutting edge head

description	cross-section	lenght	Article	euro
wire- and cable scissors	150 mm²	600 mm	8154600	222,26
replacement head			8155600	134,81

cable scissors with lever transmission

- cutting edges out of tempered Cr-V-Stahl
- shock resistant coated grip tubes
- cut property: E 2: Cu-Al Kabel up to 35 mm diameter
  E 3: Cu-Al Kabel up to 50 mm diameter
- cutting performance: E 2: up to 250 mm² (Cu-Al)
  E 3: up to 500 mm² (Cu-Al)

description	lenght	weigth	Article	euro
cable scissors E2	530 mm	1,4 kg	8155530	125,08
replacement head E2		540 g	8155531	72,01
cable scissors E3	780 mm	2,7 kg	8155780	176,01
replacement head E3		1,1 kg	8155781	108,42

cable cutter, front cutter with ratchet K24 on rather K32

- cutting performance K24 up to 24 mm diameter multi conductor
  up to 180 mm² single conductor
  K32 up to 32 mm diameter multi conductor
  up to 250 mm² single conductior
- in every position unlockable
- by spring pulling back the cutting edge will be jump to the starting position
- ergonomic, soft handle

description	lenght	weigth	Article	euro
cable cutter K24	290 mm	0,8 kg	8136290	167,51
cable cutter K32	310 mm	0,9 kg	8136310	175,08

cable cutter, ratchet cable cutter, 250 and 280 mm

- one handed cutting of copper- and aluminium cable, single- and multi wired
- cutting width by 250 mm length 32 mm up to 4x 70 mm²
  by 280 mm length 52 mm up to 4x 150 mm²
- unsuitable for cutting of steel-wire or steel wire cable!

description	lenght	weigth	Article	euro
ratchet cable cutter	250 mm		8133250	145,48
ratchet cable cutter	280 mm		8133280	200,52

cable cutting pliers 720 and 870 mm

- two handed - ratchet - cable cutting pliers
- to undo of earth- , plastic- and rubber cable
- also suitable for removing of cable with band steel and lead casing
- cutting performance: 720 mm 60 mm/ 960 mm²
  870 mm 100 mm/ 1200 mm²

description	lenght	weigth	Article	euro
cable cutting pliers	720 mm		8134720	485,20
cable cutting pliers	870 mm		8134870	561,50

cable cutter , ratchet cable cutter KS 62

- cutting section electric cable up to 62 mm diameter,
  Cu/ Al cable cross section up to 750 mm²
- turning knife and cutting plate out of special hardened chrome-nickel-steel
- suitable for thin sheet metal sheated cable
- unsuitable for cable with hardened steel insets!

description	lenght	weigth	Article	euro
ratchet cable cutter KS 62	410 mm	2,0 kg	8137410	478,89

cable cutter , ratchet cable cutter KS 62 HD

- cutting section electric cable up to 62 mm diameter,
  Cu/ Al cable cross section up to 840 mm²
- seperates also cable with thin steel plate mantle or steel reinforcement in the outside section
- suitable for thin sheet metal sheated cable
- unsuitable for hardened steel wires!

description	lenght	weigth	Article	euro
ratchet cable cutter	410 mm	2,2 kg	8138410	553,95

cable cutter , ratchet cable cutter KS 80

- smoothly operating excenter engine
- cutting section electric cable up to 80 mm diameter,
  Cu/ Al cable cross section up to 1000 mm²
- also suitable for cable with thin plate mantle or protection reinforcement out of soft steel wire
- suitable for thin sheet metal sheated cable
- unsuitable for cable with high tensile steel cable inset, Bz- conductors, steel cable!

description	lenght	weigth	Article	euro
ratchet cable cutter KS 80	610 mm	3,0 kg	8139610	632,89

cable cutter HS 85, hydraulic

- for ground cable with reinforcement up to max. 85 mm ø
- cutting head 180° revolving
- folding head with two side leaded cutting edges
- double-piston-pump for quick starting
- operation pressure: max. 700 bar
- cutting power: 50 kN
- up to 85 mm ø

description	size	weigth	Article	euro
cable cutter hydraulic	85 mm		8148085	1929,38

cable cutting device KS-100, hydraulic

- safty cutting set
- the cable cutting device is in accordance with VDE 0105 part 1 p. 9.6.4 authorized for cutting of low- and medium voltage cable
- It is proofed by the trade association and wears the GS-sign.
  Will be inadvertently cut a cable which is under voltage, for the user there won't be danger. The 10 m long hydraulic-hose guarantees highest safety by
  them insulation ability.
- maximal scissors opening is 120 mm and is suitable for cable up to 90 or 120 mm
- the devices are proofed by the BGFE according to GS EN-50340

description	size	weigth	Article	euro
hydraulic cable cutting device	bis 90 mm		8117090	on request
hydraulic cable cutting device	bis 120 mm		8117120	on request
earthing stick with ground cable			8118500	on request

mechanic pressing pliers

- In stroking pliers with C-pressure head
- 360° revolving head
- with 2 extendable fixing grips
- Cu-thorn pressing 10 - 95 mm²
- Cu-six-sided pressing 6 - 185 mm²
- Al-six-sided pressing 10 - 185 mm²
- Cu + Al -pressing round 25 - 185 mm²

description	size	weigth	Article	euro
mechanic pressing pliers		2,5 kg	8129000	380,81

six- sided press inset (with spring)

- for mechanic press pliers Art-Nr. 8 129 000
- tensile-lightened (tl)
- high-tensile (ht)

description	reference number	Cu-ZE	Cu-ZF	Al-ZE	Al-ZF	Article	euro
six- sided press inset	6	10	6	-	-	8129101	46,42
six- sided press inset	8	16	10+16	-	-	8129102	46,42
six- sided press inset	10	25	25	-	-	8129103	46,42
six- sided press inset	12	35	35	-	-	8129104	46,42
six- sided press inset	12 Al	-	-	25	25	8129105	46,42
six- sided press inset	14	50	50	-	-	8129106	46,42
six- sided press inset	14 Al	-	-	35	35	8129107	46,42
six- sided press inset	16	70	70	-	-	8129108	46,42
six- sided press inset	16 Al	-	-	50	50	8129109	46,42
six- sided press inset	18	95	-	-	-	8129110	46,42
six- sided press inset	18 Al	-	-	70	70	8129111	46,42
six- sided press inset	20	120	95	-	-	8129112	46,42
six- sided press inset	22	150	120	-	-	8129113	46,42
six- sided press inset	22 Al	-	-	95+120	95	8129114	46,42
six- sided press inset	25	185	150	-	-	8129115	46,42
six- sided press inset	25 Al	-	-	150	120	8129116	46,42
six- sided press inset	28 Al	-	-	185	150+185	8129117	46,42

press inset for pressing circular (with spring)

- for mechanical press pliers Art-Nr. 8 129 000

description	copper	aluminium	Article	euro
press inset for pressing circular	25 SM	25 SM / 35 SE	8129201	87,75
press inset for pressing circular	35 SM	35 SM / 50 SE	8129202	87,75
press inset for pressing circular	50 SM	50 SM / 70 SE	8129203	87,75
press inset for pressing circular	70 SM	70 SM / 95 SE	8129204	87,75
press inset for pressing circular	95 SM	95 SM / 120 SE	8129205	87,75
press inset for pressing circular	120 SM	120 SM / 150 SE	8129206	87,75
press inset for pressing circular	150 SM	150 SM / 185 SE	8129207	87,75
press inset for pressing circular	185 SM	185 SM / 240 SE	8129208	87,75

notch inset (with spring)

- for mechanical press pliers Art-Nr. 8 129 000
- cross sections for cable out of Al + Cu

description	copper	aluminium	Article	euro
notch inset	10 mm²	-	8129401	on request
notch inset	16 mm²	-	8129402	on request
notch inset	35 mm²	-	8129404	on request
notch inset	50 mm²	-	8129405	on request
notch inset	70 mm²	-	8129406	on request
notch inset	-	25 mm²	8129407	on request
notch inset	-	35 mm²	8129408	on request
notch inset	-	50 mm²	8129409	on request
notch inset	-	70 mm²	8129410	on request
notch inset	-	95 mm²	8129411	on request
notch inset	-	120 mm²	8129412	on request
notch inset	25 mm²	-	9129403	on request

hydraulic hand pressing pliers

- with C-press head 180° revolving
- double-piston-pump for quick starting of the press inset
- automatic over pressure safety valve
- press power 130 kN
- Cu-thorn pressing 10 - 185 mm²
- Al + Cu-six-sided pressing 6 - 300 mm²
- Cu + Al - round pressing 25 - 185 mm²

description	size	weigth	Article	euro
hydraulic hand pressing pliers		5,4 kg	8128000	1624,32

six- sided press inset

- for hydraulic press pliers Art-Nr. 8 128 000
- tensile-lightened (tl)
- high-tensile (ht)

description	reference number	Cu-ZE	Cu-ZF	Al-ZE	Al-ZF	Article	euro
six- sided press inset	8	16	10+16	-	-	8128101	80,71
six- sided press inset	10	25	25	-	-	8128102	80,71
six- sided press inset	12	35	35	25	25	8128103	80,71
six- sided press inset	14	50	50	35	35	8128104	80,71
six- sided press inset	16	70	70	50	50	8128105	80,71
six- sided press inset	18	95	-	70	70	8128106	80,71
six- sided press inset	20	120	95	-	-	8128107	80,71
six- sided press inset	22	150	120	95+120	95	8128108	80,71
six- sided press inset	25	185	150	150	120	8128109	80,71
six- sided press inset	28	240	-	185	150+185	8128110	80,71
six- sided press inset	30	-	185	-	-	8128111	80,71
six- sided press inset	32	300	-	240	-	8128112	80,71
six- sided press inset	34	-	240	300	240	8128113	80,71

press inset for pressing circular

- for hydraulic press pliers Art-Nr. 8 128 000

description	cross-section	Article	euro
press inset for pressing circular	25 SM/ 35 SE	8128201	84,27
press inset for pressing circular	35 SM/ 50 SE	8128202	84,27
press inset for pressing circular	50 SM/ 70 SE	8128203	84,27
press inset for pressing circular	70 SM/ 95 SE	8128204	84,27
press inset for pressing circular	95 SM/ 120 SE	8128205	84,27
press inset for pressing circular	20 SM/ 150 SE	8128206	84,27
press inset for pressing circular	150 SM/ 185 SE	8128207	84,27
press inset for pressing circular	185 SM/ 240 SE	8128208	84,27
press inset for pressing circular	240 SM/ 300 SE	8128209	84,27

hydraulic hand pressing pliers

- with H-press head 180° revolving
- one-piston-pump
- automatic over-pressure-safety-valve
- press power 50 kN
- six sided pressing
  Cu 10 - 240 mm²
  Al 25 - 185 mm²
- pressing round
  Cu+Al 25 - 185 mm²

description	size	weigth	Article	euro
hydraulic hand pressing pliers		2,6 kg	8127000	790,93

six- sided press inset

- for hydraulic press pliers Art-Nr. 8 127 000
- tensile-lightened (tl)
- high-tensile (ht)

description	reference number	Cu-ZE	Cu-ZF	Al-ZE	Al-ZF	Article	euro
six- sided press inset	6	10	-	-	-	8127401	46,42
six- sided press inset	8	16	10+16	-	-	8127402	46,42
six- sided press inset	10	25	25	-	-	8127403	46,42
six- sided press inset	12	35	35	-	-	8127404	46,42
six- sided press inset	12 Al	-	-	16+25	16+25	8127405	46,42
six- sided press inset	14	50	50	-	-	8127406	46,42
six- sided press inset	14 Al	-	-	35	35	8127407	46,42
six- sided press inset	16	70	70	-	-	8127408	46,42
six- sided press inset	16 Al	-	-	50	50	8127409	46,42
six- sided press inset	18	95	-	-	-	8127410	46,42
six- sided press inset	18 Al	-	-	70	70	8127411	46,42
six- sided press inset	20	120	-	-	-	8127412	46,42
six- sided press inset	22	150	120	-	-	8127413	46,42
six- sided press inset	22 Al	-	-	95+120	95	8127414	46,42
six- sided press inset	25	185	150	-	-	8127415	46,42
six- sided press inset	25 Al	-	-	150	-	8127416	46,42
six- sided press inset	28 Al	-	-	185	-	8127417	46,42

press inset for pressing circular

- for hydraulic press pliers Art-Nr. 8 127 000

description	cross-section	Article	euro
press inset for pressing circular	25 SM/ 35 SE	8127201	83,18
press inset for pressing circular	35 SM/ 50 SE	8127202	83,18
press inset for pressing circular	50 SM/ 70 SE	8127203	83,18
press inset for pressing circular	70 SM/ 95 SE	8127204	83,18
press inset for pressing circular	95 SM/ 120 SE	8127205	83,18
press inset for pressing circular	120 SM/ 150 SE	8127206	83,18
press inset for pressing circular	150 SM/ 185 SE	8127207	83,18
press inset for pressing circular	185 SM/ 240 SE	8127208	83,18

Cable of loeter equipment

safety control for use under grounding equal

- DVGW proof
- integrated leak gas testing device
- integrated hose break protection
- for use under grounding equal
- up to 1,5 kg/h
- connection 3/8" left

description	pressure	Article	euro
safety control	4,0 bar	8120000	68,03

grip for burner

- Piezo-firing in a matter of seconds
- bayonet fitting for simple and quick burner exchange
- stepless adjustable flame

description	size	weigth	Article	euro
grip for burner		300 g	8119000	85,08

shrink burner

- for shrinking on of shrink hoses up to 50 mm diameter on rather 150 mm diameter
- consumtion 400g/h, on rather 900 g/h

description	diameter	weigth	Article	euro
shrink burner	28 mm		8121028	73,63
shrink burner	38 mm		8121038	74,32

hose sets

- HD 4x4 mm, complete attached with R 3/8"-connections

description	lenght	weigth	Article	euro
hose set	3 m		8122030	13,88
hose set	5 m		8122050	19,28

pressure control

- with integrated hose break protection
- connection entry: DIN-combi
- connection exit: 3/8" left
- flow direction: max. 6 kg/h

description	pressure	Article	euro
pressure control	2,0 bar	3121000	57,73

cyclone burner

- special burner the gas flow will be splited and formed to a cyclone flame by the sloping stand of the gas canals and the steel burn tube
- the whirl flame wraps the whole tube
- gas consumtion: 19 mm 240 g/l
  25 mm 580 g/l

description	diameter	weigth	Article	euro
cyclone burner	19 mm		3123018	55,87
cyclone burner	25 mm		3123025	59,96

smallest bottle

- with base, valve and hook
- hose connection 3/8" left

description	size	weigth	Article	euro
smallest bottle		425 g	8126000	74,95

pressure control for smallest bottle

- flow performance: max. 6 kg/h

description	pressure	Article	euro
pressure control	2,0 bar	8121041	33,67

transport case, burner accessories

- stable wooden box with steel angles around
- for storing of pieces for example burner, grip, hose etc.
- inclusive holding for smallest bottle

description	size	weigth	Article	euro
transport case	280 x 180 x 330		8125000	79,80

filling over nozzle for smallest bottle

- bottle connection DIN combi

description	size	weigth	Article	euro
filling over nozzle		157 g	8121040	14,21

flame protection mat

- only for solder work
- astbest free

description	size	weigth	Article	euro
flame protection mat	250 x 250 mm		3128000	20,95

Cable assembly technology

cable pull stocking

- out of galvanized steel cable
- suitable for laying and pulling of cable
- version with eyelet for cable endings
- ca. 1m long

description	diameter	pull-load	weigth	Article	euro
cable pull stocking	6 - 10 mm	2,2 kN	0,06 kg	8145001	42,63
cable pull stocking	10 - 15 mm	3,4 kN	0,08 kg	8145002	45,99
cable pull stocking	15 - 20 mm	6,8 kN	0,14 kg	8145003	45,07
cable pull stocking	20 - 25 mm	6,8 kN	0,15 kg	8145004	52,72
cable pull stocking	25 - 30 mm	8,1 kN	0,18 kg	8145011	53,37
cable pull stocking	30 - 40 mm	11,7 kN	0,40 kg	8145005	55,32
cable pull stocking	40 - 50 mm	16,0 kN	0,45 kg	8145006	60,75
cable pull stocking	50 - 60 mm	16,0 kN	0,60 kg	8145007	63,63
cable pull stocking	60 - 70 mm	21,3 kN	0,70 kg	8145008	71,36
cable pull stocking	70 - 90 mm	27,9 kN	0,90 kg	8145009	78,13
cable pull stocking	90 - 110 mm	34,9 kN	1,50 kg	8145010	103,64

cable pull stocking

- out of galvanized steel cable
- suitable for laying and pulling of cable
- version with double-eyelet for cable endings
- ca. 1m long

description	diameter	pull-load	weigth	Article	euro
cable pull stocking	6 - 10 mm	2,2 kN	0,07 kg	8146001	52,29
cable pull stocking	10 - 15 mm	3,4 kN	0,09 kg	8146002	52,29
cable pull stocking	15 - 20 mm	6,8 kN	0,14 kg	8146003	55,07
cable pull stocking	25 - 30 mm	8,1 kN	0,30 kg	8146004	58,33
cable pull stocking	30 - 40 mm	11,7 kN	0,43 kg	8146005	65,56
cable pull stocking	40 - 50 mm	16,0 kN	0,50 kg	8146006	69,03
cable pull stocking	50 - 60 mm	16,0 kN	0,61 kg	8146007	73,72
cable pull stocking	60 - 70 mm	21,3 kN	0,83 kg	8146008	79,16
cable pull stocking	70 - 90 mm	27,9 kN	1,10 kg	8146009	90,74
cable pull stocking	90 -110 mm	34,9 kN	1,20 kg	8146010	128,96

cable pull stocking for 3 energy single conductor cable

- consists of 3 cable pull stockings and a common loop ø 22 mm

description	Version	diameter	pull-load	weigth	Article	euro
cable pull stocking	1	3x30 - 40 mm	11,70 kN	1,2 kg	8147100	156,36
cable pull stocking	2	3x 40 - 50 mm	16,00 kN	1,6 kg	8147200	162,31

pull stocking overhead line, in plaited loop

- out of galvanized steel cable
- suitable for pulling of overhead line ropes and cable
- version with in plaited loop
- three times back plaited
- 6 - 10,9 mm diameter, violet, 600 mm effect length
- 11 - 15,9 mm diameter, green, 980 mm effect length
- 16 - 22,9 mm diameter, yellow, 1200 mm effect length
- 23 - 27,9 mm diameter, gray, 1200 mm effect length
- 28 - 36,0 mm diameter, red, 1400 mm effect length

description	diameter	pull-load	weigth	Article	euro
pull stocking	6 - 10,9 mm	6,0 kN	0,35 kg	8145012	190,51
pull stocking	11 - 15,9 mm	12 kN	0,45 kg	8145013	237,37
pull stocking	16 - 22,9 mm	24,5 kN	0,70 kg	8145014	298,41
pull stocking	23 - 27,9 mm	34 kN	1,60 kg	8145015	365,89
pull stocking	28 - 36,0 mm	49,0 kN	1,80 kg	8145016	440,46

pull stocking overhead line, grouted loop

- out of galvanized steel cable
- suitable for pulling of overhead line ropes and cable
- version with aluminium capsule at the wickerwork begin
- steel litz back plaited

description	diameter	pull-load	weigth	Article	euro
pull stocking	6 - 13,0 mm	7,5 kN	0,20 kg	8145017	106,03
pull stocking	12 - 19,0 mm	11,2 kN	0,40 kg	8145018	127,42
pull stocking	19 -25,0 mm	18,4 kN	0,80 kg	8145019	132,93
pull stocking	25 - 32,0 mm	31,8 kN	1,46 kg	8145020	158,25
pull stocking	32 - 38,0 mm	40,0 kN	1,90 kg	8145021	198,52
pull stocking	38 - 48,0 mm	40,0 kN	2,10 kg	8145022	316,82
pull stocking	48 - 63,0 mm	50,0 kN	2,20 kg	8145023	353,94

spin balancing eddy

- joint serves for connection device between ache cable and the electric cable
- prevents negative effects of the turning strain
- out of tension-loadable galvanized steel

description	diameter	pull-load	weigth	Article	euro
spin balancing eddy	20 mm	10 kN		8147001	125,70
spin balancing eddy	32 mm	30 kN		8147002	142,10
spin balancing eddy	45 mm	60 kN		8147003	234,00
spin balancing eddy	60 mm	110 kN		8147004	460,50

cable laying roll

- for underground cable
- mantled, water proof ball bearing
- high frame out of galvanized steel
- for placing on already layed cable
- with steel or plastic roll

description	A	B	weigth	Article	euro
steel roll	125	80	4 kg	8144125	46,80
plastic roll	130	70	5 kg	8144130	52,65

corner roll

- for underground cable
- mantled, water proof ball bearing
- frame out of galvanized steel
- with steel or aluminum roll
- not swivelling

description	A	B	weigth	Article	euro
corner roll	130	70	10,5 kg	8140130	157,99

cable inserting attachments

- exchangeable cable inserting attachments for shaft inlet curve

description	diameter	Article	euro
cable inserting attachments	80 mm	8139080	75,42
cable inserting attachments	100 mm	8139100	80,16
cable inserting attachments	120 mm	8139120	86,60
cable inserting attachments	150 mm	8139150	95,40

insert plastic band incl. winch

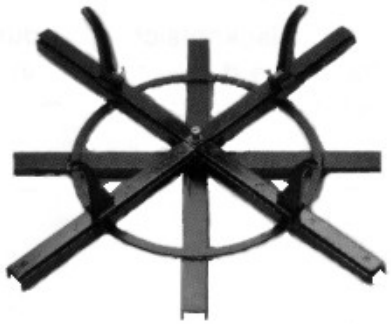
- on mobile winch
- stepless adjustable fixing break
- running in ball bearings
- with catching pear and shackle
- further lengths possible on request

description	lenght	diameter	Article	euro
insert plastic band	80 m	9 mm	8152280	804,71
insert plastic band	100 m	9 mm	8152300	940,70
insert plastic band	120 m	9 mm	8152320	1036,02
insert plastic band	150 m	11 mm	8152850	1236,73
insert plastic band	200 m	11 mm	8152900	1493,03
insert plastic band	300 m	11 mm	8152901	2127,46
insert plastic band	500 m	11 mm	8152902	3229,87

wire winch

- out of U-iron ca. 50 x 30 x 6 mm
- weight bearing capacity 150 kg

description	size	weigth	Article	euro
wire winch		ca. 18 kg	8113000	326,33



Mast placing and stay bars

pole put up device

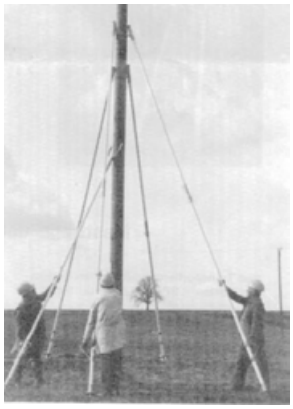
- with complete support stick
- at the stick head connected by a 13-subdivided thorn chain (for wooden poles)
- PVC-mantled pulling loop (for alu-, steel- and concrete pole)
- alu tube 50 x 4 mm ø
- thorn plate at the pole head
- two grip frames on every support stick

description	lenght	Article	euro
pole put up device	3,0 m	8206030	580,31
pole put up device	3,5 m	8206035	597,70
pole put up device	4,0 m	8206040	632,80
pole put up device	4,5 m	8206045	656,82
pole put up device	5,0 m	8206050	693,50
pole put up device	5,5 m	8206055	718,54
pole put up device	6,0 m	8206060	739,23
pole put up device	7,0 m	8206070	820,52

pole put up device

- with splited support stick
- at the stick head connected by a 13-subdivided thorn chain (for wooden poles)
- PVC-mantled pulling loop (for alu-, steel- and concrete pole)
- alu tube 50 x 4 mm ø
- thorn plate at the pole head
- two grip frames on every support stick

description	lenght	Article	euro
pole put up device	3,0 m	8207030	625,43
pole put up device	3,5 m	8207035	652,42
pole put up device	4,0 m	8207040	685,72
pole put up device	4,5 m	8207045	716,88
pole put up device	5,0 m	8207050	748,06
pole put up device	5,5 m	8207055	779,23
pole put up device	6,0 m	8207060	901,77
pole put up device	7,0 m	8207070	987,29



Shifter rods

switching stick for nominal voltage up to 110 kV

- DIN VDE 0681 part 2
- don't use while rainfall...!
- through extension part LV a deep dive into the installation is possible
- insulation tube: glass-fibre strengthened polyester tube ø 30 mm
- switching bolts: completely coated with synthetic material
- end part: is a non-slipping plastic cap

description	rated voltage	lg	li	lh	lv	Article	euro
switching stick	30 kV	1030	525	370	115	8201050	89,25
switching stick	60 kV	1500	900	300	264	8201500	107,99
switching stick	60 kV	2000	900	400	664	8201000	127,90
switching stick	60 kV	2500	900	500	1064	8202500	151,58
switching stick	60 kV	3000	900	600	1464	8203000	180,97
switching stick	60 kV	4000	900	800	2264	8204000	222,74
switching stick	110 kV	3000	1300	600	1064	8203001	180,97

switching stick for nominal voltage up to 110 kV

- DIN VDE 0681 part 2
- don't use while rainfall...!
- insulation tube: glass-fibre strengthened polyester tube filled with polyurethan foam, further silicone elastane mantle and umbrellas ø 30 mm, grey
- switching bolts: completely coated with synthetic material
- end part: is a non-slipping plastic cap

description	rated voltage	lg	li	lh	lv	Article	euro
switching stick	30 kV	2000	525	720	755	8204030	769,09
switching stick	60 kV	2500	900	813	787	8204060	1089,54
switching stick	110 kV	3000	1300	1000	697	8204110	182,77

insulation stick type BS for nominal voltage up to 110 kV

- with thread M 12
- for screwing on a thread head Art-Nr. 8 205 000
- further with six-sided inset
- also suitable for admission of clips for spindle with six-sided of earthing - and short circuit device
- insulation tube: glass- fibre strengthened polyester tube ø 30 mm, yellow
- end part: is a non-slipping plastic cap

description	rated voltage	diameter	lg	li	lh	lv	weigth	Article	euro
insulation stick	30 kV	30 mm	1000	525	300	175	0,50 kg	8205030	109,54
insulation stick	30 kV	30 mm	1500	525	500	475	0,75 kg	8205031	127,02
insulation stick	110 kV	30 mm	2000	1300	500	200	1,00 kg	8205110	148,84

switching stick head

- DIN VDE 0681 part 2
- thread M 12
- for screwing on an insulation tube with M 12 thread
- steel, complete plastic coated

description	size	weigth	Article	euro
switching stick head		0,1 kg	8205000	11,60

Hollow punches

duplex - punch

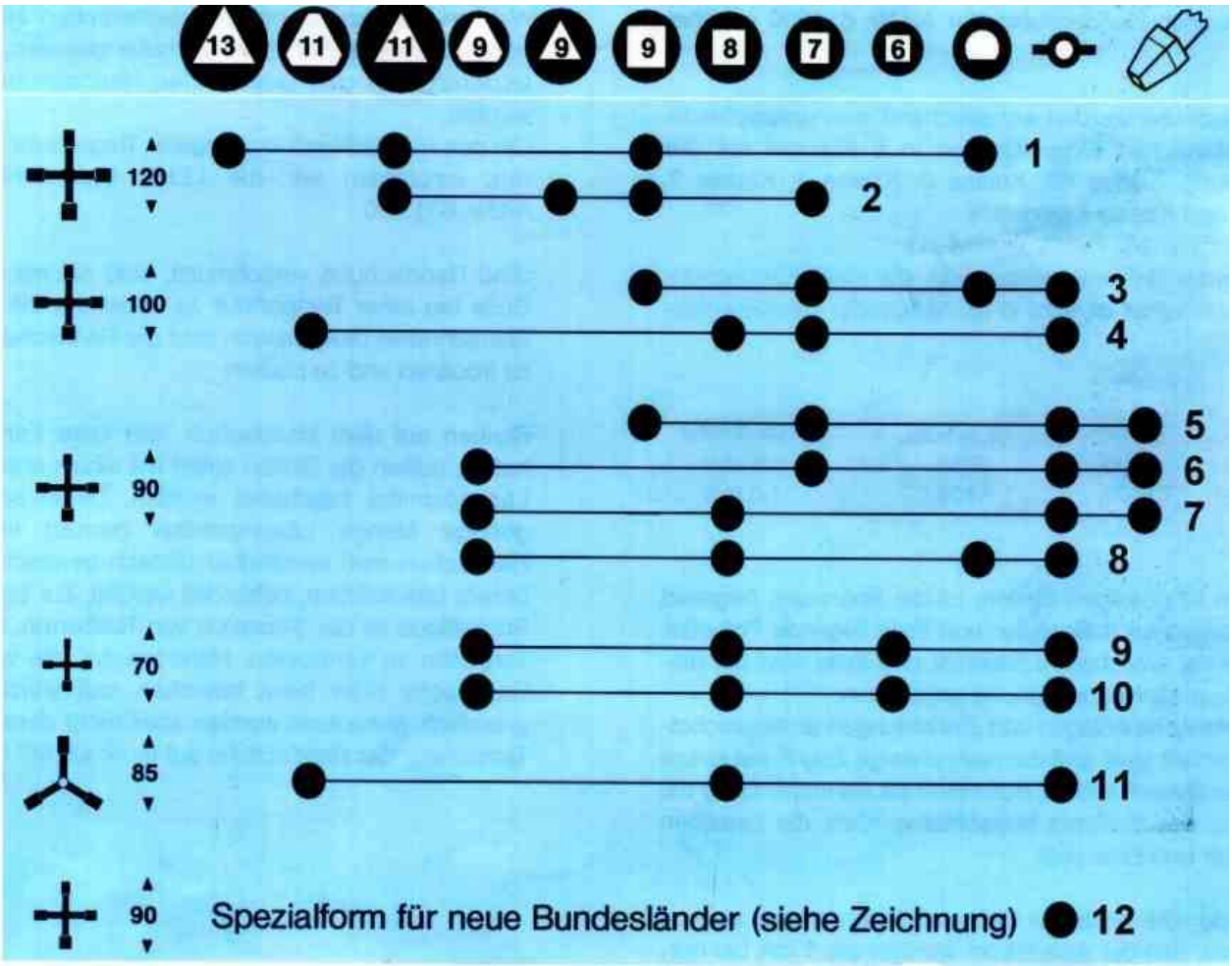
- hole up to ø 17 mm in 12 mm steel, Nr. 8 150 250
- hole up to ø 13 mm in 9 mm steel, Nr. 8 150 249
- from the hole centre to the front edge 19 mm
- spreading: 50 mm
- pressing power: 250 kN
- ideal for work on alu and Cu

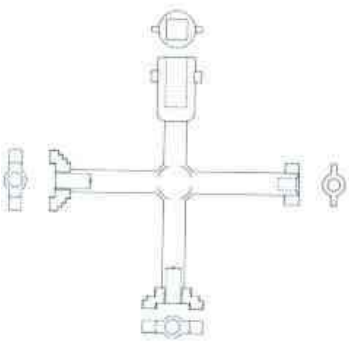
description	size	weigth	Article	euro
duplex - punch	17 mm	19 kg	8150250	505,61
stamp and stencil	8 mm		8150080	35,03
stamp and stencil	9 mm		8150090	33,36
stamp and stencil	10 mm		8150100	35,03
stamp and stencil	12 mm		8150120	35,03
stamp and stencil	13 mm		8150130	33,36
stamp and stencil	14 mm		8150140	35,03
stamp and stencil	15 mm		8150150	35,03
stamp and stencil	16 mm		8150160	35,03
stamp and stencil	17 mm		8150170	35,03

switching cabinet key

- stable version
- special version
- also for medium voltage switching installations and cabinets CSIM, BSIG
- counting cabinets and open switching installations
- listing according to the sketch top to bottom

description	Version	Article	euro
switching cabinet key	1	8121501	22,06
switching cabinet key	2	8121601	29,70
switching cabinet key	3	8121500	24,90
switching cabinet key	4	8121600	28,24
switching cabinet key	5	8121502	22,56
switching cabinet key	6	8121506	24,87
switching cabinet key	7	8121509	25,54
switching cabinet key	8	8121507	24,93
switching cabinet key	9	8121504	12,66
switching cabinet key	10	8121505	9,65
switching cabinet key	11	8121503	24,93
switching cabinet key	12	8121610	29,56





accumulator lamp JOBLUX 90 DB

- shining width: ca. 60 m
- shining duration: Pilot lamp 29 hours / 1,2 W
  main lamp 6 hours / 5,5 W xenon
- Netzladung: 230 V
- delivery scale:
  carrying belt, wall holder, 1x signal plate
- other accumulator lamps avialable on request

description	size	weigth	Article	euro
accumulator lamp	336 x 126 x 112 mm	2,5 kg	8123000	142,13

Leaders

rungs-stepladder

- according to DIN and VBG 74
- non-corrosive light metal - rectangle uprights
- grooved 60 mm width rungs for confortable standing
- 3-times flanged rungs-upright connection
- tighten connection out of high toughly nylon straps

description	lenght	Article	euro
ladder 6-steps	1,78 m	6003180	176,14
ladder 8-steps	2,34 m	6003240	220,10
ladder 10-steps	2,90 m	6003290	275,32
ladder 12-steps	3,50 m	6003350	327,52
ladder 14-steps	4,00 m	6003400	377,52
ladder 16-steps	4,60 m	6003460	449,28
ladder 18-steps	5,10 m	6003510	532,61
ladder 20-steps	5,70 m	6003570	655,24

sliding ladder 3-part

- according to DIN and VBG 74
- non-corrosive light metal - rectangle uprights
- 3-times flanged rungs-upright connection
- adjusting by hand from step to step
- the three ladder parts can be used also separete from the straight ladder

description	lenght	Article	euro
sliding ladder 3-part	2,39 - 5,80 m	6005580	274,12
sliding ladder 3-part	2,96 - 6,90 m	6005690	342,06
sliding ladder 3-part	3,52 - 8,60 m	6005860	413,61

piece to put up a ladder

- fitting to anyone at all ladder

description	size	weigth	Article	euro
piece to put up a lader	universal		6019000	120,00

push pull cable ladder, 3-part

- according to DIN and VBG 74
- through 2-cable the middle ladder and the up end ladder can be adjusted seperately
- locking by automatic effecting hooks
- non-corrosive light metal - rectangle uprights

description	lenght	Article	euro
push pull cable ladder, 3-part	4,40 - 10,55 m	6006106	903,15
push pull cable ladder, 3-part	5,25 - 12,55 m	6006125	1084,46
push pull cable ladder, 3-part	5,80 - 14,20 m	6006142	1365,20
push pull cable ladder, 3-part	6,40 - 15,90 m	6006159	1659,80

pole hang-ladder

pole hang-ladder with light metal uprights and steps
- ladders for the special professional use according to VRG 74/DIN 4567
- GS-proofed
- 5 years europe-guarantee
- strength rectangle tube uprights and steps out of light metal
- continuously grooved, step reliably four-sided steps 30 x 30 mm, numerously with uprights flanged
- bottom upright ends with exchangeable plastic shoes
- hanging hooks(320 mm Durchmesser) out of galvanized steel
- chain securing and snaplinks against accidental unhinging
- larger hook diameter on request
- standard load to see in table below:

- ladder width on the outside: 420 mm
- ladder width on the inside: 370 mm

L/B in mm

important advice: pole hang-ladders in standard version aren't intended to use in the horizontal

description	width	lenght	attached-load	standing-load	number of step	weigth	Article	euro
pole hang-ladder	0,35	2,14	100	100	6	8,9 kg	6017214	342,06
pole hang-ladder	0,35	2,70	100	90	8	9,8 kg	6017270	373,92
pole hang-ladder	0,35	3,26	100	80	10	10,7 kg	6017326	328,83
pole hang-ladder	0,35	3,82	100	80	12	11,6 kg	6017382	409,97
pole hang-ladder	0,35	4,38	125	80	14	13,5 kg	6017438	447,85

other

torque wrench

- adjustable torque wrench
- with switching transmission
- calibrated in accordance to ISO 6789, max. meassuring tolerance +/- 4%
- delivery with proof certificate, authorized by DKD (Deutscher Kalibrier Dienst = german calibration service)

description	lenght	size	torque	Article	euro
torque wrench	300	3/8"	8 - 60 Nm	1316000	153,74
torque wrench	340	3/8"	20 - 100 Nm	1316020	156,51
torque wrench	440	1/2"	40 - 200 Nm	1316040	158,05

torque wrench

- slender style, with plastic grip
- false-switching-protection by inserted button on the hilt end
- click mechanic with sliding rolls for long service life
- transmission with change-four-sided
- calibrated in accordance to ISO 6789, max. meassuring tolerance +/- 4%
- delivery with proof certificate, authorized by DKD (Deutscher Kalibrier Dienst = german calibration service)

description	lenght	size	torque	Article	euro
torque wrench	315	3/8"	2 - 25 Nm	1317000	141,06
torque wrench	350	3/8"	5 - 50 Nm	1319010	195,92
torque wrench	395	1/2"	10 - 100 Nm	1317020	125,81
torque wrench	485	1/2"	20 - 200 Nm	1317030	133,80

split pin pliers

- for W-split pins
- out of steel
- rusting protected
- for pillow lace nominal measure 11 and 16 mm ø

description	lenght	weigth	Article	euro
split pin pliers	180 mm		8154180	49,95

snake bar drill

- with thread front
- two main cutting edges
- two front cutter
- polished spiral with eyelet
- hand drill for softwood

description	lenght	diameter	Article	euro
snake bar drill	600 mm	18 mm	1324180	22,30
snake bar drill	600 mm	20 mm	1324200	24,59
snake bar drill	600 mm	22 mm	1324220	26,97
snake bar drill	600 mm	24 mm	1324240	29,78
snake bar drill	600 mm	26 mm	1324260	30,42

lever tighten device

description	size	weigth	Article	euro
lever tighten device			8131010	354,66

lever tighten device -set

- consist of:
  - lever tighten device
  - sheet metal scissors
  - bending pliers
  - hammer
  - 100 frames
- for fastening of pole at a wooden pole, iron pole, concrete pole and alu pole
- for all kinds of cross-sections(circular, triangle, quadratisch, squared rectangular, polygonal, ribbed)

description	size	weigth	Article	euro
lever tighten device -set			8131000	594,65

earth hole excavator

- with adjustable chain
- out of steel, forged
- for whole diameters 90 - 200 mm
- with ash handle

description	lenght	weigth	Article	euro
earth whole excavator	1500 mm	5,0 kg	2133000	76,23

replacement handle for earth hole excavator

- straight, out of ash

description	lenght	weigth	Article	euro
replacement handle	90 cm		2133001	7,81

Personal protection equipment

Working clothes

Drop protection

Drop protection

holding strap B3 with two thorn buckles, back support

- use: only for work with holding function
  for example on poles, roof standings etc.
- as protection against slipping
- with adjustable holding cable by rubbing buckle, cable use length max. 1400 mm
- Type: B2R
- with 170 mm width back support

description	size	body extent	belt length	Article	euro
holding strap B3	1	ab 800 mm	1300 mm	4406001	52,67
holding strap B3	2	ab 900 mm	1400 mm	4406002	53,57
holding strap B3	3	ab 1000 mm	1500 mm	4406003	54,43
holding strap B3	4	ab 1100 mm	1600 mm	4406004	55,10
holding strap B3	5	ab 1200 mm	1700 mm	4406005	55,78
holding strap B3	6	ab 1300 mm	1800 mm	4406006	56,81

cushion belt type A

- cushion belt with additional loop in the breast section im Brustbereich
- shoulder belts with additional able to take off shoulder pads
- stomack belt with climbing protection let and metal stick lock in front
- to 85 mm widen girdle with 85 mm aluminium-holding eyelet
- padded back support with eyelets for toolbags
- leg- and shoulder belts with sticking through rectangle fastening

description	size	weigth	Article	euro
cushion belt type A	1		4402000	183,75
cushion belt type A	2		4402001	183,75

pole securing cable

- EN 354
- stepless adjustable
- safety cable with stainless steel cable shortener
- will be use in circular action for pole securing cable
- pole securing cable 16 mm turned

description	lenght	Article	euro
pole securing cable	1,5 m	4409015	94,12
pole securing cable	2,0 m	4409020	96,01

safety cable, 1 karabiner

- as connection device authorized
- diameter: 16 mm
- nylon turned
- with karabiner and hand loop

description	lenght	Article	euro
safety cable	1,00 m	4410001	20,24
safety cable	1,50 m	4410002	19,06
safety cable	2,00 m	4410003	20,22

safety cable, 2 karabiner

- as connection device authorized
- diameter: 16 mm
- nylon turned
- on both sides ended with karabiner

description	lenght	Article	euro
safety cable, 2 karabiner	1,00 m	4410004	25,26
safety cable, 2 karabiner	1,50 m	4410005	27,47
safety cable, 2 karabiner	2,00 m	4410006	27,57

band fall damper

- for use with the cushion belt and the safety cable
- no function reduction by wetness or dirt on rather turning of the cable
- for fixing to every cushion belt, safety cable or cable shorter
- excellent handle, low weight
- maximal length 1,75 m
- on both sides LM-karabiner A DIN 5290

description	lenght	Article	euro
band fall damper	0,50 m	4410007	42,59

connection device - band fall damper

- A-karabiner and FS-90-karabiner
- band fall damper with cable
- diameter: 16 mm

description	lenght	Article	euro
connection device	1,00 m	4410010	84,03
connection device	1,50 m	4410011	85,21
connection device	2,00 m	4410012	86,40

connection device - band fall damper

- on both sides A-karabiner
- band fall damper with cable
- diameter: 16 mm

description	lenght	Article	euro
connection device	1,00 m	4410013	51,96
connection device	1,50 m	4410014	53,15
connection device	2,00 m	4410015	54,33

cushion device with band fall damper

- 16 mm turned PA-cable
- on one side karabiner, on the other side end safeguarding
- independent running cushion device
- band fall damper short 15 cm

description	lenght	Article	euro
cushion device	5 m	4405005	124,56
cushion device	10 m	4405100	133,86
cushion device	15 m	4405150	144,81
cushion device	20 m	4405200	158,66

connection device - band fall damper

- karabiner and fall damper karabiner
- cable with 16 mm diameter, turned

description	lenght	Article	euro
connection device	1,50 m	4410008	59,09
connection device	2,00 m	4410009	60,25

cushion device, fall damper, running by

- safety cable with karabiner should puted on if possible only at the work place
- by pressing button the cable will be unblocked
- by getting to the place of work you have to pull the cable to the back through by hand
- with the cable shortener and the fall damper it's possible to safeguard by the "circular action" to constructions with any diameter
- device will be fixed to the left catching eyelet
- the karabiner of the safety cable on the right catching eyelet
- the fall damper function of the device dampens in the case of a fall the catch bump power around 70 %
- cable diameter: 16 mm, nylon, turned
- on one side karabiner, on the other end safety device, incl. tight hanged holding band, ca. 0,5 m long

description	lenght	weigth	Article	euro
cushion device	3,0 m		4406010	135,75
cushion device	5,0 m		4406020	142,59
cushion device	10,0 m		4406030	157,50
cushion device	15,0 m		4406040	172,41
cushion device	20,0 m		4406050	187,34
cushion device	30,0 m		4406060	202,86

safety set 1

consists of:
- cushion belt type A EN 361
- running by cushion device on movable guide
- 15 m safety cable, diameter: 16 mm
- 16,2 m action cable
- device case

description	size	weigth	Article	euro
safety set 1	1		4401000	225,30

profi-set 4

- cushion belt type A EN 361
- height safeguard equipment EN 360 with 7 m wire cable
- device case

description	size	weigth	Article	euro
profi-set 4	4		4401003	659,41

strap bag with/ without flap

- tool bag out of stabil cow-leather with loop
- colour: black
- for use on holding and cushion belts
- device bag with eyelet and tieing cord
- material: PVC-coated fabric, blue
- for admission of straps

description	size	weigth	Article	euro
strap bag without flap	300 x 200 x 80 mm		3132000	35,11
strap bag with flap	300 x 200 x 80 mm		3132001	41,42
device bag	500 x 300 mm		3132002	16,75

Measuring instruments

Low-voltage

Single-pole tension examiners

volt-stick

- voltage tester contact free
- possible for a first quick test
- for scenting of alternating voltages on cable, electrical outlets, etc.
- works without direct metal contact
- no contact with voltage leading parts
- serves however not for testing if the cable is free of voltage according to 5 safety rules

description	size	weigth	Article	euro
volt-stick		40 g	9002000	24,16

Two-pole tension examiners

continuity tester - Dutest

- continuity- and load checking device
- measure section 0 - 90 kOhm
- nominal voltage section up to 400 VAC/DC
- acoustic signal with loud buzzer
- polarity testing
- torch function
- IP 40
- electricity supply 3 x 1,5 V IEC LR 6

description	size	weigth	Article	euro
continuity tester		300 g	9003000	22,21

voltage detector ProfiSafe

- two poles voltage- and continuity tester according EN/IEC 61243-3
- nominal voltage: 12 - 690 V AC/DC
- voltage displaying: through LED in steps 12, 50, 120, 230, 400, 690 V
- frequency section: 0 ... 2000 Hz
- electricity (highest point Is): 30 mA
- insulation testing voltage: 6 kV/piece testing cover-insulation
- maintenance-free electricity supply over built-in solar cells with lithium-accumulator
- accessories: etui out of synthetic leather for ProfiSafe

description	size	weigth	Article	euro
voltage tester		170 g	9003005	65,23
storage bag		50 g	9003006	15,57

voltage detector with load connecting Duspol, compact

- displays DC and AC voltage on LED 12, 24, 50 and 120 V
- dipping reeling level gauge 230, 400, 500 VAC/DC, 750 VDC
- rotary field direction- and phase checking on LCD "R"
- polarity checking
- connecting of the dipping reeling level gauge through push-button actuator Is from 50 mA
- load connecting through push-button actuator: Is 200 mA
- protection kind IP 64 (dust proof/ splash-water protected)
- accessories: sythetic-leather bag

description	size	weigth	Article	euro
voltage detector		245 g	9003023	34,27

voltage detector with rotary field display Duspol, analog

- displays DC and AC voltage on LED 12, 24, 50 and 120 V
- dipping reeling level gauge 230, 400, 500 VAC/DC, 750 VDC
- rotary field direction- and phase checking on LCD "R"
- polarity checking
- connecting of the dipping reeling level gauge through push-button actuator Is from 50 mA
- protection kind IP 64 (dust proof/ splash-water protected)
- accessories: sythetic-leather bag

description	size	weigth	Article	euro
voltage detector		200 g	9003024	47,60

voltage- and continuity detector Duspol - Combi

- displays 12 - 400 V AC / 750 V DC on LED
- continuity- and semiconductor cheching of 0 - 600 kOhm through LCD
- phase and polarity checking
- load connecting through push-button actuator: Is 200 mA
- protection kind IP 64 (dust proof/ splash-water protected)
- accessories: sythetic-leather bag

description	size	weigth	Article	euro
voltage- and continuity detector		245 g	9003022	52,50

voltage detector - Digital Plus

- from 5 - 500 V AC / 1,5 - 750 V DC
- lighten display with LED
- stepless voltage display
- rotary field direction- and phase checking
- load connecting through push-button actuator: Is 200 mA/750 V
- with measuring point lighting through LED, 10 Lux in 30 cm
- protection kind IP 64 (dust proof/ splash-water protected)
- incl. 2 micro-batteries 1,5 V

description	size	weigth	Article	euro
voltage detector		210 g	9003021	76,80

bipolar voltage detector SPB 500

- 100 - 500 V
- light signal from 50 V, LCD from 24 V, LED from 50 V
- phase: single-pole with contact sensor
- frequency section: 0 - 100 Hz
- electricity (highest point Is): < 30 mA
- turning on duration: 30 seconds
- voltage strengh: over voltage category CAT IV
- protection kind IP 65, device also useable while rainfall
- shock resistant body out of EPDM

description	size	weigth	Article	euro
voltage detector		480 g	9003007	156,80

bipolar voltage detector SPB 500 A

- 100 - 500 V
- light signal from 50 V, LCD from 24 V, LED from 50 V
- acoustic signal < 57 dB, interval
- phase: single-pole with contact sensor
- rotary field direction: bipolar with contact sensor
- frequency section: 0 - 100 Hz
- electricity (highest point Is): SPB acoustic < 40 mA
- turning on duration: 30 seconds
- voltage strengh: overvoltage category CAT IV
- protection kind IP 65, device also usable while rainfall...
- shock resistant body out of EPDM

description	size	weigth	Article	euro
bipolar voltage detector		480 g	9003008	215,10

voltage detector accessories, SPB 500, SPB 500 A

- synthetic-leather bag for storing
- checking ends for overhead lines
- plastic cover for checking ends
- sticking into ends for ground cable
- stylus ends for checking holes in the protection cover
- function checker SG 1with 9 V battery, checking voltage 500 V

description	size	weigth	Article	euro
synthetic-leather bag		60 g	9003009	30,91
checking ends for overhead lines 500 mm		50 g	9003010	32,85
plastic cover for checking ends		30 g	9003011	4,90
sticking into ends for ground cable		40 g	9003012	21,36
stylus ends for checking holes 70 mm		40 g	9003013	21,36
function checker		50 g	9003014	129,77

Counter starting ester

counter starting - tester

- for checking of low voltage counters
- alternatively 50 or 100 W insertable load
- nominal voltage 230/400 VAC
- nominal voltage 50 and 100 Watt
- signal lamp (LED red) for voltage display 230 V~
- signal lamp (LED green) for voltage display 400 V~
- integrated temperature guard(thermal over load protection)
- automatic cooling of the load resistances
- shock- and breaking resistant body
- protection class II
- protection kind IP 20
- accessories: etui out of synthetic-leather for counter starting - tester

description	size	weigth	Article	euro
counter starting - tester		265 g	9007000	163,50
storage bag		50 g	9007010	14,79

counter starting - tester ZAP

- according to EN/IEC 61243-3 certificated
- nominal voltage 24-500 VAC/DC
- for quick starting - test by putting into service of electricity meter
- insertable power of 350 W by 230 V
- thermal and over load protection
- thermal switch, switching point 70 °C
- start duration 30 s
- safety body fully out of rubber
- water- and dust proof IP 65

description	size	weigth	Article	euro
counter starting - tester	350 W	515 g	9007500	371,65

Rotary field direction indicator

rotary field direction indicator, 3-pole

- 3 pole rotary field direction indicator
- for nominal voltages 40-440 V
- CAt III/300 V
- for quick determining of the phase sequence in the rotary electricity network
- display of the 3 phases with glowing lamps
- display of the rotary field direction with glowing lamps

description	size	weigth	Article	euro
rotary field direction indicator, 3-pole		200 g	9001100	114,54

rotary field direction indicator C.A 6607

- rotary field direction display, display of phase interrupts and motor rotary field direction checking
- checking of AC-voltage: 100 - 600 VAC
- operation frequency: 45 - 70 Hz
- electronic protection and safeguarding
- electrical safety: 600 V according to IEC 61010

description	size	weigth	Article	euro
rotary field direction indicator		180 g	9001044	118,74

analogmultimeter MX 1

- robust version
- voltage measurement 5-1500 VAC / 150mV-1500 VDC
- current live measurement 10 A
- bandwidth 1 kHz
- basic accuracy 2%
- acoustic continuity check
- protection kind IP 65, safety IEC 61010, CAT III, 600 V
- basic accuracy : class 2

description	size	weigth	Article	euro
analogmultimeter MX 1		420 g	9004002	187,86

multimeter MX 56 C

- measuring section DC voltage: 0,5-1000 V
  5-50-500 mA
- measuring section AC voltage: 0,5-750 V
  5-50-500 mA
- continuity checking of 10 - 20
- frequency: 0,62 Hz up to 500 kHz
- basic accuracy 0,025 %
- device can be calibrated per software
- protection kind IP 67, fully sealed
- by the peripheral interface adapter the measuring data are transferable to the PC
- delivery scale: 1 set measuring cable
  1 piece 9 V battery
- further accessories are avialable on request

description	size	weigth	Article	euro
multimeter MX 56 C		250 g	9004001	580,29

multimeter X 1000

- voltage AC/DC 750 V/ 1000 V
- current measurement 10 A
- bandwidth 500 Hz
- basic accuracy 0,8 %
- 2000 measuring points

description	size	weigth	Article	euro
multimeter X 1000		150 g	9004000	118,24

digital pliers amp meter MX 650

- current measurement up to 1000 A AC
- pliers opening 36 mm
- voltage 750 V AC / 1000 V DC
- resistance test
- continuity checking
- according to IEC 61010 CAT III / 600 V

description	size	weigth	Article	euro
digital pliers amp meter		380 g	9004003	218,74

grounding test pliers C.A. 6412

- for quick ground loop checking
- absolutly safe checking, no opening of the interfaces necessary
- enclosing-diameter: 32 mm
- operating temperature: -10 bis +55°C
- protection kind: IP 30 according to EN 60529
- max. permissible electricity: 1000 V AC durating
- measuring frequency 2400 Hz
- enables the measuring of possible leakage currents to the ground
- delivery with transport case incl. 9 V battery

description	size	weigth	Article	euro
grounding test pliers C.A. 6412		900 g	9004010	1462,50

power measuring pliers MX 2040

- current measurement 2000 A AC
- voltage measurement 400-750 VAC/ 600-1000 VDC
- frequency, resistance, continuity, work power, apparent power, blindpower
- pliers opening 64 mm
- analog outlet and interface RS 232 optional
- static frequency changer signals 3 kHz
- measuring functions: Peak, Min, Max, Avg and so on
- possible use of the data later at the PC (adapter+software optional)
- delivery scale incl. 3 measuring cable + 3 batteries

description	size	weigth	Article	euro
pliers amp meter MX 2040		400 g	9004004	1003,86

power- and harmonic analysis-pliers

- power checking, monitoring, analyze with a device possible
- measurment of voltage, current and performance(1 Ph. or 3 Ph.) and harmonic
- work -, blind and apparent power
- highest points, smoothed values Werte
- also in disturbed AC/DC-nets
- harmonic analyses
- large lighted display for 3 measurement values at the same time (3 x 100 measurement points)
- RS 232 interface
- enclosing ability ø 50 mm on rather runner 8 x 5 mm
- current 300 mA - 1000 A-/~
- voltage 50 mV - 600 V-/~
- frequency 0,5 - 20 kHz
- delivery: transport case and measure cable, 2 crocodile clips, adapter for RS 232 output, software

description	size	weigth	Article	euro
analysis-pliers F 27		670 g	9004005	1234,11

Isolation measuring instruments

micro-ohmmeter

- measurement of smallest resistances with mW-resolution
- electricity direction switch
- completly protected against overloads from the outside
- measurment according to the 4-conductor-process
- control display for valid measuremets
- electrical safety according to IEC-norm 348, class II
- protection kind: IP 54

description	size	weigth	Article	euro
micro-ohmmeter		8 kg	9004017	3390,25

crank inductor IMEG 1000 N

- checking voltages: 250 - 500 - 1000 V
- measurements up to 5000 MOhm
- electricity supply by crank inductor
- measure process according to VDE 0413 and NF C 15-100
- automatic section switching
- control lamp for correct measure condition
- checking for voltage free
- protection kind IP 54 (with top)
- electrical safety according to IEC 414 - 600 V
- delivery supply: device without measurement cable
- avialable accessory set: transport bag with 4 measurement cable 1 checking end, 2 crocodile clips

description	size	weigth	Article	euro
crank inductor		1500 g	9001006	923,91
accessories - set		200 g	9001500	143,50

insulation measurement device C.A. 6525

- insulation measurement: 50 kOhm
- continuity: 0 - 20 Ohm
- resistance: 0 - 400 kOhm
- voltage: 0 - 600 V AC/DC
- has a display lighting, alarm-function, timer-function
- according to IEC 61010 300 V CAT II-2
- protection kind IP 54
- delivery incl. transport bag

description	size	weigth	Article	euro
insulation measurement device		830 g	9004020	542,60

probe for remote controlling

- enables the activation of insulation measurements on the contact end and offers a lighting of the measure-position
- for use with insulation measure device C.A. 6525

description	size	weigth	Article	euro
probe		150 g	9004021	142,36

Grounding measuring instruments

grounding measure device C.A 6460

- digital earting- and ground resistor measuring device
- protected by IP 53
- according to VDE 0413 and IEC 61557
- large digital display with 2000 measure points
- high measurement reliability through self-test
- protection insulated according to IEC 61010
- measure section: 0,00 - 2000 Ohm (3 sections)

- measure frequency: 128 Hz
- overload protection: high-power fuse

description	size	weigth	Article	euro
grounding measure device		1300 g	9004008	887,48

grounding accessory set standard

- 2 ground rod
- 2 winches à 30 m
- 1 cable 3m
- 1 hammer
- transport bag

description	size	weigth	Article	euro
grounding accessory set		3500 g	9004009	362,20

Line detecting devices

cable- and conductor searching device

- locating system for determining of cable and metal conductors
- pasive locating of foreign conductors
- point signal receipt
- frequency 22 kHz
- consists of transmitter and reciver
- accessory:
  - connection cable
  - winch with 10 m grounding cable
  - grounding stick
  - nylon-devices bag
- transmitter and reciver are each time avialable as single pieces

description	size	weigth	Article	euro
cable- and conductor searching device		6,5 kg	9001016	3006,96

Equipment examiner for localvariable devices

devices checker Benning 700

- suitable for safety- and repetition checks according to DIN VDE 0701/0702, BGV A3
- measurement of the protective conductor resistance with checking power 200 mA / 10 A
- measurement of the work-/replacement diverting electricity/insulation resistance
- measurement of the protective conductor- and contact electricity according to the difference electricity process
- functions test after passed safety check(voltage, electricity)
- PC-interface for barcode reader
- internal measure value memory for 199 checkings

delivery scale:
- checking device Bennig 700
- service bag out of nylon
- safety checking end with 4 mm safety jack
- 1 m connection cable with 4 mm safety plug

further accessories on request for example.:
- PC-Win software with RS-232 cable
- barcode reading pen
- PVC-barcode external label (320 pieces/ pack)

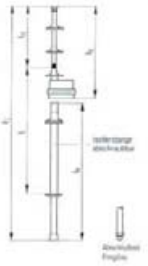
description	size	weigth	Article	euro
devices checker Benning 700			9001600	957,05

Professionelle Servicetasche im Lieferumfang

Medium-voltage

voltage detector TYPE PHE

- certificated according to DIN VDE 0682 part 411
- also usable during rainfall, because insulation stick fully filled with polyethan
- electronic display
- low overall length
- deriving electricity also during rainfall much lower than 0,5 mA
- insulation stick and check end with silicone elastan cover
- lg = 1565 mm, li = 525 mm, lo = 770 mm, ls = 1010 mm, lb = 660 mm

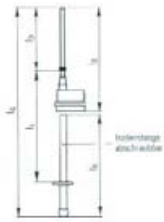


useable also during rainfall

description	rated voltage	weigth	Article	euro
voltage detector	6 - 20 kV	2600 g	9006004	673,49

voltage detector TYP PHE switchable

- certificated according to DIN VDE 0682 part 411
- nominal voltage 3-30 kV
- 3 voltage sections 3-6 kV, 10-20 kV, 15-30 kV
- switch with rotary switch with marking
- suitable for in- and outdoor installations
- low overall length through unscrewable insulation stick
- lg = 1565 mm, li = 525 mm, lo = 770 mm, ls = 895 mm, lb = 640 mm



unsuitable for work during rainfal!l

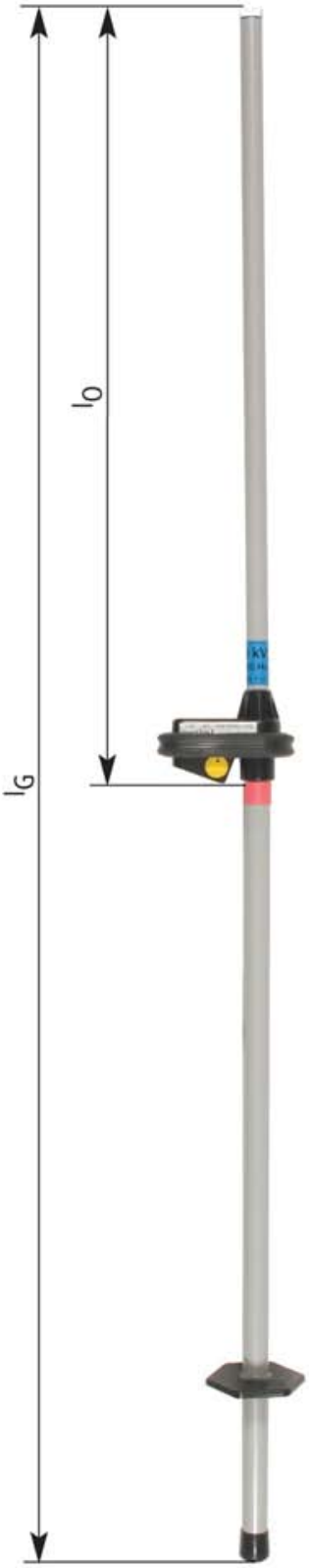
description	rated voltage	weigth	Article	euro
voltage detector	3 - 30 kV	1600 g	9006005	551,58

high voltage detector TYPE PHG II

- certificated according to DIN VDE 0682 part 411
- with glow lamp display for indoor installations
- flashing light display of the three glow lamps if "Spannung vorhanden"(voltage is avialable)
- insulation stick out of glass-fibre strengthen polyester
- displaying device plastic black
- fork shaped button electrode
- pasive voltage detector without batteries
- lg = 1425 mm, li = 525 mm, lo = 720 mm

only for indoor use!

description	rated voltage	weigth	Article	euro
high voltage detector	6 kV	900 g	9006000	203,93
high voltage detector	10 kV	900 g	9006001	205,86
high voltage detector	20 kV	900 g	9006002	224,51



voltage detector TYPE PHE III

- certificated according to DIN VDE 0682 part 411
- with optical and acoustic display
- with self test device
- low overall length
- for switching cabinets and overhead lines
- low transport length through taking off able insulation stick and check end
- further nominal voltages on request

useable also during rainfall

description	rated voltage	lg	li	lo	ls	lb	weigth	Article	euro
voltage detector	3 kV	1080	525	285	455	640	1000 g	9008003	658,39
voltage detector	6 kV	1080	525	285	455	640	1000 g	9008006	658,39
voltage detector	10 kV	1080	525	285	455	640	1000 g	9008010	658,39
voltage detector	20 kV	1230	525	435	605	640	1050 g	9008020	664,22
voltage detector	30 kV	1415	525	620	790	640	1100 g	9008030	675,87

voltage detector TYPE PHE III switchable

- certificated according to DIN VDE 0682 part 411
- nominal voltages 3 - 30 kV / 50 Hz
- with optical and acoustic display
- for switching cabinets and overhead lines
- lg = 1675mm, li = 525 mm, lo = 880 mm, ls = 1050 mm, lb = 640 mm
- short transport length through taking off able insulation stick and check end

useable also during rainfall

description	rated voltage	weigth	Article	euro
voltage detector	3 - 30 kV	1250 g	9006016	774,92

Phase comparator

phase comparator TYPE PHV

- certificated according to DIN VDE 0681 part 4
- for checking of the phase similarity by rotary electricity installations
- bipolar basic device, out of epoxy resin tube, gray
- nominal voltages 3 - 36 kV, 50 Hz
- length basic device = 720 mm

Don't use during rainfall!

description	rated voltage	weigth	Article	euro
phase comparator	3 - 36 kV	800 g	9006007	285,51

check ends for PHV

- for use with basic device phase comparator TYPE PHV
- diameter: d1 = 20 mm
- the prices are each time for 1 piece check end

description	lenght	diameter	size	weigth	Article	euro
check ends	l1 = 381 mm	d1 = 20 mm	3 - 3,6 kV	225 g	9006008	85,46
check ends	l1 = 681 mm	d1 = 20 mm	5 - 7,2 kV	360 g	9006009	99,86
check ends	l1 = 681 mm	d1 = 20 mm	10-12 kV	360 g	9006010	97,10
check ends	l1 = 681 mm	d1 = 20 mm	15 - 24 kV	360 g	9006011	105,66
check ends	l1 = 681 mm	d1 = 20 mm	V 30	360 g	9006012	115,75
check ends	l1 = 415 mm	d1 = 20 mm	V 10 S 1	55 g	9006013	116,54
check ends	l1 = 585 mm	d1 = 20 mm	V 20 S 1	65 g	9006014	174,79
check ends	l1 = 585 mm	d1 = 20 mm	V 20 V*	1150 g	9006015	143,80

phase comparator PHV I, one-pole

- according to DIN/VDE 0681/431
- one- pole phase comparator
- suitable for in- and outdoor installations
- frequency section of 49,90 - 50,10 Hz
- short transport length through unscrewable insulation stick
- with self-test device

description	size	weigth	Article	euro
phase comparator PHV I, one-pole	6-12 kV	2600 g	9006612	860,09
phase comparator PHV I, one-pole	12-24 kV	2600 g	9006624	872,83
phase comparator PHV I, one-pole	24-36 kV	2600 g	9006636	872,83

phase comparator PHV I, one-pole, adjustable

- according to DIN/VDE 0681/431
- one- pole phase comparator
- 3 nominal voltage sections 6-12 kV / 12-24 kV / 24-36 kV switchable
- suitable for in- and outdoor installations
- frequency section of 49,90 - 50,10 Hz
- short transport length through unscrewable insulation stick
- with self-test device

also useable during rainfall

description	size	weigth	Article	euro
phase comparator PHV I, one-pole	6-36 kV	2600 g	9006100	1071,14

storage bag volt-detector, phase comparator

- with carrying strap
- diameter 250 mm
- fitting to voltage detector and phase comparator PHV 1

description	size	weigth	Article	euro
storage bag	160 x 1210 mm	350 g	9006102	82,81

storage case voltage-detector, phase comparator empty

- with foam rubber insets
- for voltage detector and phase comparator
- max to stock with a basic device PHV and 6 check ends straight

description	size	weigth	Article	euro
case, empty	920 x 215 x 140 mm	2,2 kg	9006101	302,63

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