

## Cablecutters, Pliers, Cutting and Stripping Tool

- Cable and Corer Cutters
- Power Cable Cutter
- Ratchet Cutters, Bolt Cutters, Wire Rope Cutters
- Stripping Tool
- Pliers, All Plastic Pliers
- Cableknives

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## Application Tools

- Ratchet Lever, Cross Socket Set, Torque Tools
- Socket Spanner Insert, Allen Key Inserts
- Open End Ring Spanner, Reversible Ring Ratchet Lever
- Screwdriver, Switch Cabinet Spanner
- Nut Holder

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## Electrical Safety Wear and Equipment

- Gloves, Safety Fuse Holders
- Safety Suits, Safety Helmet, Safety Boots, Face Shields
- Rubber Shrouding, Standing Surface Insulation, Safety Clamps
- Push on Safety Covers, Rubber Moulds
- Safety Covers, Cover for Cable Link Box

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## Voltage Detector, Earth Connection and Bridging Device

- Voltage Detector
- Continuity Tester
- Short Circuit Device for Low Voltage Overhead Cable, Cable Distribution Cabinet
- Short Circuit Device for lower part of NH Fuse, Screw Safety Clamps
- Current Collector Device
- Shunt / Bridging Device

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## Devices for Distribution Lines and Cable Installation

- Insulating Ladders ,Rope Lifting Device
- Pulley, Rope Tension Clamp
- Fastener Harness, Catching Harness, Safety Chain, Climbing Iron
- Spirit Level, Drills, Hammer, Brush, Wedge
- Work and Emergency Power Light, Explosion proof light
- Tents
- Soldering Tools

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## Tool Cases and Equipment

- Belt Cases and Tool Holders
- Shoulder Cases, Carrying Cases, Tool Cases
- Hard Tip Cases, Plastic Cases, Folding Cases
- Complete Equipment

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## Hydraulic Compression and Cutting Tools

- Hydraulic Compression and Cutting Tool
- Electric Hydraulic Compression Tool
- Hydraulic Compression Head for Drive Mechanics
- Foot Operated Hydraulic Pump, Hydraulic Drive Mechanics
- Safety Cutting Unit
- Hydraulic Cutting Tools for Drive Mechanics
- Electric Bus Bar Processing Units

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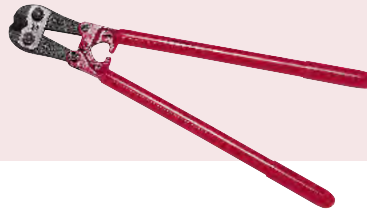
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# Cablecutters, Pliers, Cutting- and Stripping Tools

- Cable- und Core Cutters
- Power-Cable Cutter
- Ratchet Cutters, Bolt Cutters, Wire Rope Cutters
- Stripping Tool
- Pliers, All-Plastic Pliers
- Cableknives



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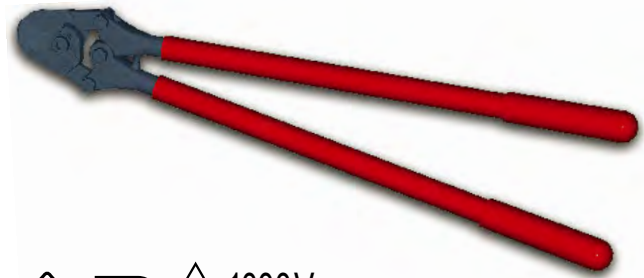


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## Cable and wire cutter

- For smooth cutting of copper and aluminum conductors
- Replaceable cutting head
- The razor-sharp cutters guarantee a smooth and effortless cut
- Cutting without squashing the cable, leaving the cable end with very little deformation
- Suitable for copper and aluminium cables only
- Made of chromium-molybdenum tempered steel
- Professional multi-coated insulation

► Bag for storage and transportation available



Description	Order-ref.	—mm—	Jaw opening	Material cross section/mm <sup>2</sup>	⚖
Cable and Wire Cutter	253360	600	26	150	2600
Cable and Wire Cutter	253370	700	33	180	3200
Spare Blades for 253360	253860				325
Spare Blades for 253370	253870				380
Carrying Bag	737021	600			215

## Cable Cutter with telescopic handles

- For smooth cutting of copper and aluminium conductors
- Replaceable cutting head
- The razor- sharp cutters guarantee a smooth and effortless cut
- For copper and aluminium cables only
- Handle with multi-coated insulation

► Bag for storage and transportation available



Description	Order-ref.	—mm—	Jaw opening	Material cross section/mm <sup>2</sup>	⚖
Cable and Wire Cutter	253260	350 - 550	31	185	2000
Spare Blades for 253260	253760				300

## Cable Cutter

- Controlled cutting power by means of carefully selected leverage
- Material high tensile forged steel
- Cuts aluminium and copper earth cable, plastic and rubber insulated up to 27mm diameter
- For copper and aluminium cables only
- Professional multi-coated insulation

► Bag for storage and transportation available



Description	Order-ref.	—mm—	Jaw opening	Material cross section/mm <sup>2</sup>	⚖
Cable and Wire Cutter	254350	500	37	150	1800
Cable and Wire Cutter	254360	600	37	150	1800

## Cable Cutter

- Replaceable cutting head
- Cutting head made of oil-hardened steel
- The razor-sharp blades guarantee a smooth and effortless cut
- Light metal handles
- Suitable for copper and aluminium cables only
- Professional multi-coated insulation

► Bag for storage and transportation available



Description	Order-ref.	—mm—	Jaw opening	Material cross section/mm <sup>2</sup>	⚖
Cable Cutter	277346	460	30	approx. 120	1430
Cable Cutter	277361	600	35	approx. 180	2070
Cable Cutter	277380	800	60	approx. 500	3800
Spare Blades for 277346	277946				640
Spare Blades for 277361	277961				660
Spare Blades for 277380	277980				1140

## Cable Cutter

- The sickle shaped blades ensure a very precise and clean cut;
- Curved cutting edge for extra safety
- Face-ground cutters made of hardened chrome vanadium steel;
- Adjustable pivot screw
- Teflon coated blades
- Screw on handles for easy replacement
- Maximum stability and light in weight
- Ergonomically designed tubular handles
- Hardened tubular lever with easy-grip handles
- For copper and aluminium cables only
- Also available as insulated safety tool



Description	Order-ref.	—mm—	Ø mm	Cutting capacity	mm <sup>2</sup>	⚖
Cable Cutter E II	252102	530	35		180	1400
Cable Cutter E III	252103	780	50		500	2700

## Single Handed Ratchet Cutter

- 100,000 cuts with proven ratchet system
- Genuine single handed tool
- No awkward jamming of the blade
- Cutting can be interrupted at any point in the cut
- Blades are opened by depressing spring loaded opening lever
- Ideally suited for use in constricted cable ways
- For copper and aluminium cables only
- Spare blades and parts available



Description	Order-ref.	—mm—	Ø mm	Cutting capacity	mm <sup>2</sup>	⚖
Single-handed Ratchet Cutter	252032	330	32		250	800

## Insulated single handed ratchet cutter

- Genuine single handed tool
- No awkward jamming of the blade
- Cutting can be interrupted at any point in the cut
- Professional multi-layer dipped insulation
- Blades can be opened by depressing spring loaded lever
- Spare blades and spare parts available
- New blades can be fitted without disturbing the insulation
- Optionally available - separate insulation for working head cover
- Only for Copper and Aluminium cable up to 32 mm multi conductor cable or 250 mm on wire conductor



figure.: 252532 + 252550



Description	Order-ref.	—mm—	Ø mm	Cutting capacity	mm <sup>2</sup>	⚖
One hand ratchet cuttr insulated	252532	310	32		250	1000
Isolating-Cover	252550					100

## Ratchet Cutter

- Powerful precision cutter with robust toothed blade drive
- Ratchet lock on moving blade
- Moving blade adjustable to any position
- Cuts multi and fine stranded cables up to 36 mm Ø
- Only for copper and aluminium cables
- Professional multi-layer dipped insulation
- Spare blades and spare parts available
- Not recommended for working under live conditions



Description	Order- ref.	—mm—	Ø mm	Cutting capacity	mm <sup>2</sup>	⚖
Cable End Cutter	251520	320	36		240	1350

## Ratchet Cutter

- Cuts copper and aluminium cables without deformation
- Single handed use possible on account of ratchet operation
- Can be used to strip insulation
- The cutting blade can be set to any position using thumb operated lever
- Effortless cutting by optimal levered linkage and easy handling due to light weight and good design
- Ideally suited for working in confined spaces
- Very high grade cutting steel

► For working under voltage use part number 251310 - fully insulated version.



Description	Order - Ref	—mm—	Ø mm	Cutting capacity	mm <sup>2</sup>	⚖
Single-handed Ratchetcutter	251505	250	32	240	550	
Single-handed Ratchetcutter	251510	280	52	380	740	
Single-handed Ratchetcutter	251310	280	52	380	740	

## Insulated Ratchet Cable Cutter D32/D54

- Cuts copper and aluminium cables
- Very powerful cutter
- Can be used single handed on account of geared leverage and small movement of the handles
- Progressive cutting fed mechanism with double stroke
- 360° rotating cutting head that can be released in any position
- Compact dimensions and comfortable handles of impact resistant plastic
- Can be used down to -40°C
- High-tensile special steel



Description	Order - ref	INT-Id.	—mm—	Ø mm	Cutting capacity	mm <sup>2</sup>	⚖
Ratchet cutter D32	251332	1605 032	300	32	260	650	
Ratchet cutter D54 short	251354	1607 054	285	54	480	800	
Ratchet cutter D54 long	251355	1605 054	320	54	480	900	

## Ratchet Cutter

- Powerful two handed cutter
- Double ratchet with powerful cam gearing
- Wide, virtually indestructible teeth on rotating and fixed blades
- For cutting multi stranded and fine wire cables of copper / aluminium of 62/80 mm diameter
- For Copper and Aluminium cables only
- Can also cut thin steel strip cable armouring, or thin Steel Wire Armour on the outside of the cable (not suitable for hardened steel wire armoured cable)
- Handle with multi - coat dipped insulation



Description	Order-ref.	—mm—	Ø mm	Cutting capacity	mm <sup>2</sup>	⚖
Ratchet Cutter	251522	420	62	840	2200	
Ratchet Cutter	251525	550	80	1000	3150	

### Rechargeable Cable Cutter

- Rechargeable Cable Cutter for the complete range of cables for low and medium voltage e.g. up to 4 x 150 mm<sup>2</sup>. Alu and 4 x 95 mm<sup>2</sup> Cu, for copper and aluminium cables up to maximum 50 mm diameter Not suitable for cutting SWA or DSTA Cable.
- Exceptionally clean cutting by means of cross cutting of blades on ratchet cutter
- Amazingly rapid action only a few seconds per cut, about 50 cuts with one battery charge.
- Overload safety cut-out for protection of the tool
- Spare blades and all spare parts available
- Kit 251550 includes:
  - 1 piece rechargeable cable cutter
  - 1 piece 12 volt rechargeable battery
  - 1 piece battery charger 230/240V 50 Hz input supply
  - 1 piece tough plastic carrying case



Description	Order-ref.	— L x B x H —	Cutting capacity	Cutting force	⚖
Rechargeable Cable Cutter including plastic carrying case	251550	345 x 135 x 105 mm	Ø 50 mm	25 kN	2900
Spare-battery	251555				540
Spare-blade (moveable)	251556				380

### Wire Rope Cutter

- Two-handed Wire Rope Cutter for steel cable and wires
  - Handles made of high tensile Aluminium Alloy
  - Optimal cutting of blade and handle design
  - All parts easily replaced
  - Also available insulated
  - Manufactured in Europe
- Type C16E with special blade for cutting electrical overhead lines with or without steel core up to 20 mm dia



Description	Order-ref.	— mm —	Material Ø in mm (strong steel ropes)	⚖
Wire Rope Cutter C 12	277563	500	8	1500
Wire Rope Cutter C 16	277560	600	14	2300
Wire Rope Cutter C 16 E	277600	600	Cu- and Al- Cable up to 20 mm Ø steel core	2300
Spare Blades for 277563	277863			890
Spare Blades for 277560	277861			890
Spare Blades for 277600	277900			890

### Wire Rope Cutter

- The specially designed leverage system of this tool provides amazingly effortless cutting of high tensile wire ropes and rods
- all parts are easily replaced
- light metal handles



Description	Order.ref.	— mm —	soft Wire Cable	hard Wire Cable	electr. Cabel- with Steelcore	⚖
Wire Rope Cutter C108	277561	560	8 mm Ø	8 mm Ø	8 mm Ø	1950
Wire Rope Cutter C112	277562	730	12,7 mm Ø	12,7 mm Ø	12,7 mm Ø	3600
Spare Blades for 277561						890

## Wire rope Cutter

- Replaceable cutting head
- Cutting head made of special alloyed steel
- Square cut blades for the hardest steel wires
- Handles made of light metal
- Professional multi-coated insulation



Description	Order.Ref.	—mm—	Cu- + Al. Cable/mm <sup>2</sup>	Steel rope Ø	Round steel Ø	Jaw opening	⚖
Cable and Wire Cutter	277446	460	95	10	7	10	1340
Cable and Wire Cutter	277360	600	150	14	9	20	2710
Spare Blades for 277446	277846						475
Spare Blades for 277360	277860						910

## Bolt cutter, insulated

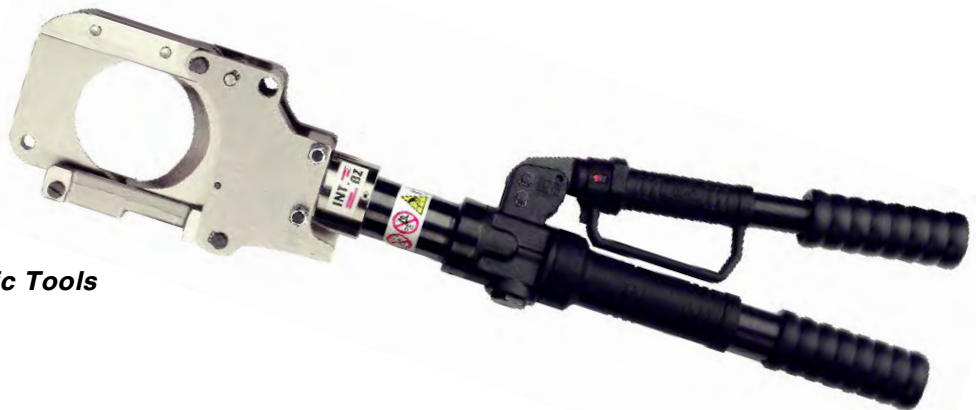
- Chrome vanadium blade
- Tempered steel
- Eccentric adjustment
- Professional multi-coated insulation



Description	Order-ref.	—mm—	Material Ø in mm (high tensile steel ropes)	⚖
Bolt Cutter insulated	275246	460	7 mm Ø	1400
Bolt Cutter insulated	275261	610	9 mm Ø	2500
Bolt Cutter insulated	275276	760	11 mm Ø	4500
Bolt Cutter insulated	275291	910	13 mm Ø	6300
Bolt Cutter insulated	275295	1060	15 mm Ø	8000
Replacement Blades for 275246	275047			1400
Replacement Blades for 275261	275062			1600
Replacement Blades for 275276	275077			1800
Replacement Blades for 275291	275092			1800
Replacement Blades for 275295	275107			2000

## Manual Hydraulic Compression Cutter

see also Page 180 > Hydraulic Tools



## LEMP Round Cable Cutter

- Specially designed for cutting and stripping conductor before cable lug is applied. After cutting, the lug is easily applied to the conductor end because the conductor retains its rounded shape
- The best tool of its kind on the market regarding cutting of cables up to 35 mm<sup>2</sup> of soft, stranded copper and aluminium conductors
- Single-handed use
- Specially tempered tool steel
- Sharp, tempered precision cut blades
- For copper and aluminium cables only



Description	Order-ref.	—mm—	Jaw opening single handed	Max / mm <sup>2</sup>	⚖
LEMP Round Cable Cutter	254316	170	ca. 16 mm	35	215

## Cable Cutter D17

- Designed to cut copper- and aluminium cables
- High cutting capacity for the smallest dimension
- With adjustable screw joint
- Special tool steel with chrome finish
- Handles of impact resistant plastic in 2-component-design
- Can be used down to -40°C



Description	Order-ref.	INT-Id.	—mm—	Jaw opening single handed	Max / mm <sup>2</sup>	⚖
Cable cutter D17	254317	1602 160	165	ca. 17 mm	50	218

## Cable Cutters D15 UNYX ISOplus

- Complete cable cutter made of impact-resistant glass-fibre reinforced plastic with integrated cutting blades made of high tensile steel
- 1- or 2-component-handle
- Designed for cutting flexible copper and flexible aluminium conductors with maximum 50 mm<sup>2</sup>
- High cutting capacity for the smallest dimension
- Extra robust design
- Can be used down to -40°C



Description	Order-ref.	INT-Id.	—mm—	Jaw opening single handed	Max / mm <sup>2</sup>	⚖
Cable cutter D15 UNYX isoplus 1K	25431701	1108 4	170	ca. 15 mm	50	150
Cable cutter D15 UNYX isoplus 2K	25431702	1109 4	170	ca. 15 mm	50	138

### Cable Cutter

- Specially designed for cutting and stripping conductor before cable lug is applied. After cutting, the lug is easily applied to the conductor end because the conductor retains its rounded shape
- The best tool of its kind on the market regarding cutting of cables up to 50 mm<sup>2</sup> of soft, stranded copper and aluminium conductors
- Single-handed use
- Specially tempered tool steel
- Sharp, tempered precision cut blades
- For copper and aluminium cables only
- Professional multi-coated insulation



1000V  
EN/IEC 60900:2004

Description	Order-ref.	—mm—	Jaw opening single handed	Max / mm <sup>2</sup>	⚖
Cable Cutter	254321	210	ca. 8 mm	50	400

### Cable Cutter

- For cutting ribbon cable and round cable
- Blade designed for very easy cutting
- Single-handed use
- For copper and aluminium cables only
- Professional multi-coated insulation



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EN/IEC 60900:2004

Description	Order-ref.	—mm—	Jaw opening single-handed	Max / mm <sup>2</sup>	⚖
Special Cable Cutter	254320	220	ca. 18 mm	35	410

### Cable Cutter

- With screwed adjustable pivot
- Material special tool steel, polished and burnished
- A clean easy cut based on its new style of cutting geometry
- For cutting multi-core earth, plastic and rubber cables of aluminium and copper up to a cable diameter of 20mm in one cut
- When cutting in two stages cable diameters up to 25mm can be cut
- For copper and aluminium cables only
- Professional multi-coated insulation



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EN/IEC 60900:2004

Description	Order. ref.	—mm—	Jaw opening single-handed	Max / mm <sup>2</sup>	⚖
Cable Cutter	254322	200	ca. 20 mm	70	340

### Cable Cutter D22

- Designed to cut copper- and aluminium cables
- When cutting in two stages cable diameters up to 25mm can be cut
- High cutting capacity for the smallest dimension
- Easy and clean cut with single hand use
- With adjustable screwing joint
- Special steel with chrome finish
- Handles of shock-proofed plastic in 2-component-design
- Can be used down to -40°C



1000V  
EN/IEC 60900:2004


Description	Order ref.	INT-Id.	—mm—	Jaw opening single-handed	Max / mm <sup>2</sup>	⚖
Cable cutter D22	254323	1602 200	200	22 mm	80	345

### Cable Cutter, U.S. Type

- Must be positioned with both hands
- Heavy U.S. type
- For rough handling and maximum performance
- For copper and aluminium cables only
- Professional multi-coated insulation



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EN/IEC 60900:2004


Description	Order.ref.	—mm—	Jaw opening single-handed	Max / mm <sup>2</sup>	
Cable cutter U. S. Modell	254324	240	ca. 10 mm	75	570

### Cable Cutter, long

- For two-handed positioning
- Single-handed use
- For copper and aluminium cables only
- Professional multi-coated insulation



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EN/IEC 60900:2004


Description	Order.ref.	—mm—	Jaw opening single-handed	Max / mm <sup>2</sup>	
Cable Cutter U.S. Type	254326	240	approx. 10 mm	75	570

### Side Cutter

- For hard and soft wires
- Blades induction hardened
- Polished chrome head
- Professional multi-coated insulation



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Description	Order.ref.	—mm—	Max Ø mm (soft wire)	
Side Cutter	236316	160	> 4	235
Side Cutter	236318	180	> 4	260

### Side Cutter 2K

- Very slim design with dropped forged head
- For cutting hard and soft wire
- Blades induction hardened
- High cutting performance
- Two component impact resistant insulated handles
- Can be used down to -40°C



   1000V  
EN/IEC 60900:2004

Description	Order.ref.	INT-Id.	—mm—	Max Ø mm (soft wire)	
Diagonal cutting pliers 2K	23631601	1102 160	160	> 4	208

### Side Cutter with insulated Head

- For hard and soft wire
- Blades induction tempered
- Polished chrome head with an approx. 1,5 mm transparent and highly flexible insulation coating
- Maximum angle of opening 30°
- Professional multi-coated insulation



Description	Order-ref.	— mm —	Max Ø mm (soft wire)	⚖
Side Cutter with insulated head	236516	160	> 4	230
Side Cutter with insulated head	236518	180	> 4	260

### Power Side Cutter

- For cables and overhead lines with tempered pivot for maximum performance
- For piano wire of up to 3 mm Ø and also for soft wire
- Inductively tempered precision blades
- Polished chrome head
- Made of tempered chrome vanadium steel
- Professional multi-coated insulation



Description	Order-ref.	— mm —	Max Ø mm (soft wire)	⚖
Power Side Cutter	237320	200	> 4	340
Power Side Cutter	237325	250	> 4	460

### Special Side Cutter, heavy duty usage

- For cables and overhead lines
- Heavy duty
- Polished chrome head
- Inserted pivot
- With bevelled outside sheath
- Cuts the hardest wires
- Professional multi-coated insulation



Description	Order-ref.	— mm —	Max cutting size soft wire / tempered steel wire	⚖
Special Side Cutter	236326	260	4 mm Ø / 2,5 mm Ø	460

### Pincer Cutter

- Manufactured to DIN ISO 5748
- Category H for cutting the hardest wires
- Finnish: highly polished
- Form B with recessed swivel joint and polished blade
- Material: VANADIUM EXTRA
- Maximum cutting sizes: max 2.0mm diameter hardened steel wire  
max 3.0mm diameter copper wire
- Professional multi-coated insulation



Description	Order-ref.	— mm —	Max cutting size soft wire / tempered steel wire	⚖
Pincer Cutter, insulated	238317	160	3,0 mm Ø / 2,0 mm Ø	350

### Side Cutter for Lead Seals with two replaceable indent letters

- Nickel-plated
- Indent letters can be delivered with engraving!
- Professional multi-coated insulation
- Engraving can be available at competitive price



**1000V**  
EN/IEC 60900:2004

Description	Order-ref.	— mm —	⚖
Side Cutter for lead leads	286316	155	230
Indent Letters without engraving	000071	8	10
Engraving Letter/Numeral	000081		

### Side Cutter for lead seal wire

- With device to retain the cut wire
- Special high-hardness steel cutting edges (for hard wire)
- Burnished surface
- Impact resistant plastic handles
- **Attention: not suitable for work under voltage**



Description	Order-ref.	INT-Id.	— mm —	⚖
Cutter for sealing wire	286315	AP0714	150	100

### Side Cutter for Electronic Equipment

- Central pivot, precise, low-wear and long life-span
- Surface rust-protected
- No danger of flaked off chrome in electric circuits
- Fastened and low-friction spring for a gentle and even opening and closing
- Comfortable to handle even when used continuously
- Professional multi-coated insulation



Description	Order-ref.	— mm —	⚖
Electronic Side Cutter	236211	110	65

### Engineers Pliers

- Made of tempered tool steel
- Blades of induction hardened steel
- Professional multi-coated insulation

#### Additionally order no. 216319

- Chrome vanadium electrically hardened steel
- Cuts piano wire



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Description	Order-ref.	— mm —	Cutting rate Ø mm (Cable)	⚖
Engineers Pliers	216316	160	10	270
Engineers Pliers	216318	180	12	285
Engineers Pliers (piano wire)	216319	190	13	335
Engineers Pliers	216320	200	13	360
Engineers Pliers	216326	260	15	560

## Engineers Pliers 2K

- Very slim design of the entire head
- Head rounded off at the sides
- Extra long tempered blades
- For cutting hard and soft wire
- High cutting performance; low friction pivot
- Wear-resistant gripping jaws
- Two component impact resistant insulated handles
- Can be used down to - 40° C



Description	Order-ref.	INT-Id.	—mm—	Cutting rate Ø mm (Cable)	⚖
Engineers pliers 2K	21631601	1101 160	160	14	218
Engineers pliers 2K	21631801	1101 180	180	16	250
Engineers pliers 2K	21632001	1101 200	200	18	282

## Engineers Pliers with insulated Head

- Made of tempered tool steel
- Blades induction hardened
- Professional multi-coated insulation
- Polished chrome head with a 1,5 mm transparent and highly flexible insulation coating
- Maximum angle of opening 30°

### Additionally order No.216419

- Made of chrome vanadium tempered electric steel
- Wire steel



Description	Order-ref.	—mm—	Cutting rate Ø mm (Cable)	⚖
Engineers Pliers with insulated head	216418	180	12	290
Engineers Pliers with insulated head	216419	190	13	330
Engineers Pliers with insulated head	216420	200	13	390

## UNYX Iso Plus Pliers

- Complete cable cutter made of impact-resistant glass-fibre reinforced plastic with integrated cutting blades of high tensile steel
- 1- or 2-component-handle
- Extra long blades
- For copper and aluminium cables with maximum 16 mm<sup>2</sup>
- High cutting strength
- Gripping surface with 3 indentations for various cable diameters
- Extra robust design
- Can be used down to -40°C



Description	Order-ref.	INT-Id.	—mm—	Cutting rate Ø mm (Cable)	⚖
UNYX iso plus pliers 1K	21641901	1108 2	190	16	152
UNYX iso plus pliers 2K	21641902	1109 2	190	16	142

### Round Nosed Pliers

- Short, round jaws
- Precision cut
- Smooth grip
- For fixing circlips
- Made of specially tempered tool steel
- Polished chrome head
- Professional multi-coated insulation



Description	Order-ref.	mm	Weight
Round Nosed Pliers	218316	160	190

### Long Round Nosed Pliers

- Long, round jaws
- Precision cut
- Smooth grip
- For fixing circlips
- Made of specially tempered tool steel
- Polished chrome head
- Professional multi-coated insulation



Description	Order-ref.	mm	Weight
Long Round Nosed Pliers	218816	160	165

### Long Round Nosed Pliers 2K

- Long, round jaws
- Gripping surface indented
- Can be used down to -40°C
- 2-component-handles



Description	Order. ref.	INT-Id.	mm	Weight
Long Round Nosed Pliers 2K	21881601	1107 160	160	170

### Flat Nosed Pliers

- Short, flat jaws
- Gripping surface toothed
- Made of specially tempered tool steel
- Polished chrome head
- Professional multi-coated insulation



Description	Order-ref.	mm	Weight
Flat Nosed Pliers	217316	160	200

### Flat Nosed Pliers with insulated Head

- short, flat jaws
- gripping surface toothed
- made of specially tempered tool steel
- polished chrome head with an approx. 1,5 mm transparent and highly flexible insulation coating
- maximum angle of opening 30°
- professional multi-coated insulation



Description	Order- ref.	— mm —	⚖
Flat Nosed Plier with insulated head	217416	160	220

### Gripping pliers ISOplus

- complete cable cutter made of impact-resistant glass-fibre reinforced plastic
- 2-component-handles
- gripping surface with 8 indentations for various cable diameters
- without blades
- extra robust design
- Can be used down to -40°C



Description	Best. Nr.	INT-Id.	— mm —	⚖
Gripping pliers ISOplus	21771801	1109 1	180	134

### Flat Long Nosed Pliers

- long, flat jaws
- gripping surface toothed
- polished chrome head
- professional multi-coated insulation



Description	Order-ref.	— mm —	⚖
Long Flat Nosed Pliers	217816	160	160

### Flat-Nosed Pliers 2K

- long flat nosed
- gripping surface toothed
- 2-component-handles
- Can be used down to -40°C



Description	Order- ref.	INT-Id.	— mm —	⚖
Long-Flat Nosed 2K	21731601	1106 160	160	170

### Long Flat Nosed Pliers with insulated Head

- Long, flat jaws
- Gripping surface toothed
- Polished chrome head with an approx. 1,5 mm transparent and highly flexible insulation coating
- Maximum angle of opening 30°
- Professional multi-coated insulation



1000V  
EN/IEC 60900:2004

Description	Order-ref.	mm	
Long Flat Nosed Pliers with insulated head	217716	160	180

### Telephone Pliers

- Flat-round, long and straight jaws
- Gripping surface toothed
- Induction hardened blades
- Made of tempered vanadium steel
- Polished chrome head
- Professional multi-coated insulation



1000V  
EN/IEC 60900:2004

Description	Order-ref.	mm	
Telephone Pliers	225316	160	190
Telephone Pliers	225320	200	225

### Telephone Pliers 2K

- Flat, round jaws
- With blades for hard and soft wire
- Gripping surface toothed
- 2-component-handles
- Can be used down to -40°C



C 1000V  
EN/IEC 60900:2004

Bezeichnung	Best. Nr.	INT-Id.	mm	
Telephone Pliers 2K	22531601	1103 160	160	170
Telephone Pliers 2K	22532001	1103 200	200	208

### Telephone Pliers with insulated Head

- Flat-rounded, long and straight jaws
- Gripping surface toothed
- Induction hardened blades
- Made of tempered vanadium steel
- Polished chrome head with an approx. 1,5 mm transparent and highly flexible insulation coating
- Maximum angle of opening 30°
- Professional multi-coated insulation



1000V  
EN/IEC 60900:2004

Description	Order-ref.	mm	
Telephone Pliers with insulated head	225520	200	230

### Telephone pliers ISOplus 2K

- Complete tool made of impact-resistant glass-fibre reinforced plastic
- 2-component-handles
- Gripping surface toothed
- Thin head for operation in restricted places
- Extra robust design
- Can be used down to  $-40^{\circ}\text{C}$



Description	Order- ref.	INT-Id.	— mm —	⚖
Telephone pliers ISOplus 2K	2255180	111095	210	100

### Telephone pliers, curved

- Made of tempered chrome vanadium steel
- Flat-rounded long jaws, gripping surface toothed
- Blades induction hardened
- Polished chrome head
- Professional multi-coated insulation



Description	Order-ref.	— mm —	⚖
Telephone Pliers, curved	225317	160	170
Telephone Pliers, curved	225321	200	235

### Telephone pliers curved 2K

- Flat, round jaws
- Cutters for soft and middle-hard wire
- Gripping surface toothed
- 2-component-handles
- Can be used down to  $-40^{\circ}\text{C}$



Description	Order- ref.	INT-Id.	— mm —	⚖
Telephone pliers curved 2K	22531701	1104 160	160	164
Telephone pliers curved 2K	22532101	1104 200	200	206

### Telephone pliers curved with insulated Head

- Made of tempered chrome vanadium steel
- Gripping surface toothed
- Flat-rounded long jaws,
- Blades induction hardened
- Chrome head with an approx. 1,5 mm transparent and flexible insulation coating
- Maximum angle opening  $30^{\circ}$
- Professional multi-coated insulation



Description	Order-ref.	— mm —	⚖
Telephone pliers, curved with insulated head	225521	200	240

### Wire Positioning Pliers

- Made of tempered steel
- Chrome head
- Carefully smoothed edges
- Smooth gripping surface
- Professional multi-coated insulation



1000V  
EN/IEC 60900:2004

Description	Order-ref.	mm	
Wire Positioning Pliers	223318	180	200

### Wire Positioning Pliers with insulated Head

- Made of tempered steel
- Chrome head
- Carefully smoothed edges
- Smooth gripping surface
- Head with 1,5 mm transparent and flexible insulation coating
- Maximum angle opening 30°
- Professional multi-coated insulation



1000V  
EN/IEC 60900:2004

Description	Order-ref.	mm	
Wire Positioning Pliers with insulated head	223418	180	210

### Pincers curved, insulated

- Hardened, gripping surface toothed
- Professional multi-coated insulation



1000V  
EN/IEC 60900:2004

### Pincers straight, insulated

- Hardened, gripping surface toothed
- Professional multi-coated insulation

Description	Order-ref.	mm	
Pincers, curved	111845	145	50
Pincers, curved	111800	210	79
Pincers, straight	111846	145	50
Pincers, straight	111801	210	83

### Flat Nosed Pliers, round jaws for cylindrical fuses

- With rounded jaws
- Glass-fibre reinforced, tough non-brittle plastic
- For changing cylindrical fuses
- Jaw Openings: Ø 11 mm and Ø18 mm



1000V  
EN/IEC 60900:2004

Description	Order-ref.	mm	
Plastic flat Nosed Pliers, round jaws	217318	180	90

### Flat Nosed Pliers, short jaws

- Solid design with extreme twisting and bending strength
- Glass-fibre reinforced, tough non-brittle plastic
- For holding, bending and twisting of single wires
- Gripping surface with 4 indentations for various cable diameters



 1000V  
EN/IEC 60900:2004

Description	Order-ref.	— mm —	
Flat nosed pliers, short jaws	217518	180	100

### Gripping Pliers ISOplus

- Complete tool made of impact-resistant glass-fibre reinforced plastic
- 1-component-handles
- Gripping surface with 8 indentations for various cable diameters
- Without blades
- Extra robust design
- Can be used down to -40°C



   1000V  
EN/IEC 60900:2004

Description	Order-ref.	INT-Id.	— mm —	
Gripping pliers ISOplus	217718	1108 1	180	144

### Flat Nosed Pliers, long jaws

- Long jaws
- Glass-fibre reinforced, tough non-brittle plastic
- For fitting and disconnection of electricity meters
- For holding and inserting single wires



 1000V  
EN/IEC 60900:2004


Description	Order-ref.	— mm —	
Flat nosed pliers, long jaws	217918	180	90

### Telephone Pliers ISOplus

- Complete tool made of impact-resistant glass-fibre reinforced plastic
- 1-component-handles
- Gripping surface toothed
- Thin head for operation in restricted places
- Extra robust design
- Can be used down to -40°C



   1000V  
EN/IEC 60900:2004

Description	Order-ref.	INT-Id.	— mm —	
Telephone pliers	225518	1108 5	200	146

### Insulation Stripper

- With fine adjustment screw and opening spring
- Made of tempered steel
- Polished chrome head
- For solid and stranded conductors of up to Ø 5mm or 10 mm<sup>2</sup>
- Professional multi-coated insulation



Description	Order-ref.	mm	g
Insulation Stripper	271316	165	180

### Insulation Stripper

- With fine adjustment screw and opening spring
- For cables from 0,75 - 6,00 mm<sup>2</sup>
- 2-component-handles
- Can be used down to -40°C



Description	Order-ref.	INT-Id.	mm	for Cable	g
Insulation Stripper	271318	1105 160	180	0,75 - 6 mm <sup>2</sup>	190

### Insulation Stripper with insulated Head

- With fine adjustment screw
- Made of tempered steel
- Polished chrome head
- For solid and stranded conductors of up to Ø 5mm or 10 mm<sup>2</sup>
- Polished chrome head with approx. 1,5 thick mm transparent and highly flexible professional multi-coated insulation
- Professional multi-coated insulation



Description	Order-ref.	mm	g
Insulation Stripper with insulated head	271416	165	185

### Universal cable stripper

- For cables and wires with PVC-Insulation 0,08 – 6mm<sup>2</sup>
- Self-adjusting
- Shock-proofed plastic
- **ATTENTION: not suitable for work under voltage**



Description	Order-ref.	INT-Id.	mm	for Cable	g
Universal-Cable Stripper	271520	AV8210	205	0,8 - 6 mm <sup>2</sup>	202
Replacement blade	271521	AV8219	-	-	-

### Insulation stripper - self adjusting

- For removing the insulation of single and multi-core and fine wired conductors having plastic or rubber insulation in the cross section size 0.08 - 10.00 mm<sup>2</sup>. Also thin ribbon cable up to 10mm wide
- Material: reinforced glass fibre plastic housing
- Self adjustment of the insulation cutting knives according to the various insulation thickness without manual adjustment
- No damage to the conductor, no spreading out of stranded conductors
- Insulation removal length adjustable in the range 3-18mm long
- Supplied with wire cutter for multi-core cables up to 10mm<sup>2</sup>, single core conductors up to 6mm<sup>2</sup>.
- Gripping jaws easily changed
- Lightweight, robust and simple mechanical operation



Description	Order-ref.	— mm —	Cable sizes	⚖️
Insulation Stripper - self adjusting	271516	200	automatic adjustment from 0.08 to 10 sqmm	210

### Cable stripper

- For every kind of insulation
- Cable diameter of 4,5-29mm
- Round-, longitudinal- and spiral- cut possible
- Easy to change blade
- **ATTENTION: not suitable for work under voltage**



Description	Order- ref.	INT-Id.	— mm —	for cable Ø	⚖️
Cable stripper	271517	AV3810	138	4,5 - 29 mm	98
Replacement blade	271518	AV3819	-	-	

### Waterpump pliers

- Made of chrome-vanadium steel
- 7-position box joint
- Toothed grip surface
- Mechanical stop
- **ATTENTION: not suitable for work under voltage**



Description	Order- ref.	INT-Id.	— mm —	⚖️
Waterpump pliers	292224	7101 237	237	344

### Waterpump pliers

- Strong central pivot
- A new generation of water pump pliers for easier and safer handling
- Fast, accurate adjustment by push button
- No unintended adjustments
- Fine adjustment screw, ninefold single-handed adjustment
- Specially hardened toothed grip
- Strength of teeth approx. 56 HRC
- Self gripping onto pipes and nuts
- Made of tempered chrome vanadium steel
- Clamping guard prevents injury
- Professional multi-coated insulation



Description	Order-ref.	— mm —	⚖️
Water Pump Pliers	292618	180	230

### Waterpump Pliers

- Central pivot
- Grips well to pipes and nuts and does not slip off workpiece
- Specially hardened toothed grip
- Clamping guard prevents injury
- Optimal leverage
- 7-position box joint
- Made of tempered chrome vanadium steel
- Professional multi-coated insulation



Description	Order-ref.	mm	⚖️
Waterpump Pliers	292625	250	370
Waterpump Pliers	292630	300	570

### Waterpump Pliers 2K

- 2-component-handles
- Made of chrome-vanadium
- Central pivot
- 7-position box joint
- Fine toothed powerful grip
- Mechanical stop



 1000V  
EN/IEC 60900:2004

Description	Order-ref.	INT-Id.	mm	⚖️
Waterpump Pliers 2K	29262501	1110 250	245	398

### Waterpump Pliers

- Screwed thread drive
- Stepless adjustment of diameters by knurled nut
- Clamping guard prevents injury
- Made of chrome vanadium 31 CrV 3 steel
- Polished chrome head
- Professional multi-coated insulation



 1000V  
EN/IEC 60900:2004

Description	Order-ref.	mm	⚖️
Waterpump Pliers	292626	260	590

### Pliers, Split Pin

- For W-split pins
- Made of steel, rust-proof
- For pins of 11 and 16 mm steel Ø



Description	Order-ref.	mm	⚖️
Split Pin Plier	276000	180	450

see also Page 199 wire end sleeve pliers Order-ref. 271600



## Insulation Stripping Device for MS Cables

### not suitable for working under voltage

- For removing all insulation coating and lead covering of MS cables 24-60 mm Ø
- Insert with replaceable blade
- Adjustable cutting depth from 0 to 4 mm
- Screw-shaped cut along axis of cable by simple rotation of the device
- Circular cut possible by changing blade position
- Adjustment of cable diameter by means of counter pressure-prism
- Body of tough impact resistant plastic
- Supplied in a handy imitation leather case, (290x110x80mm) including cable knife (Order ref. 281400)



Description	Order ref.	INT-Id.	Length	Width	Height	⚖
Insulation Stripping Device for MS-Cable	244400	AE 6210	230	60	50	350
Replacement blade for 244440	244401					40

## Cable Sheath Cutter - Universal (AMS)

### not suitable to use for work under voltage

- For removing insulation coatings on cables with Ø from 25 mm
- Adjustable cutting depth from 0 to 5 mm
- Replaceable double blade (reversible blade)
- Suitable for longitudinal and circular cuts



Description	Order ref.	INT-Id.	⚖
Cable Sheath Cutter-Universal (AMS)	244500	AV6220	300
Replacement Blade for 244500	244501	AV6299	40

## Cable Sheath Cutter - Universal VDE

### not suitable to use for work under voltage

- For removing insulation coatings on cables with Ø from 25 mm
- Adjustable cutting depth from 0 to 5 mm
- Replaceable double blade (reversible blade)
- Suitable for longitudinal and circular cuts



Description	Order ref.	INT-Id.	⚖
Cable Sheath Cutter-Universal VDE (AMS)	244510	17131	350
Replacement Blade for 244510	244501	AV 6299	40

## Hole Cutter

- Insulation is pierced to 4 mm diameter and removed
- Piercing of insulation with test prod of a voltage detector not necessary
- Provides a safe measuring point
- Reduced risk of misreadings and damage to test device
- Insulation of tough non-brittle plastic



Description	Order-ref.	— mm —	Hole diameter	⚖
Hole Cutter with safety cap	284300	200	4 mm	90

## AIS Outer and Inner Cable Sheath Stripper


Designed to cut and remove the outer plastic sheath .

- Cuts and removes outer plastic sheaths up to 5.0 mm thick, on L.V and M.V cables having diameters in the range 16 - 52 mm
- Ideally suited for removal of outer waterproof sheathing on M.V cables.
- Hooked blade for removal of the cut sheath
- Purpose built tool for making round and longitudinal cuts with the minimum effort
- Ratchet lever moves tool in both directions longitudinally with no danger of personal injury
- 2-component-handles
- can be used down to -40°C
- Colour coded and easy to change plastic spacer rings allow the cutting depth to be adjusted in steps of 0.5mm , up to 5.0 mm.
- According to EN 60900 and usable for work under voltage up to 1000 V

### Set Consists of:

- ASI Cable Stripper
- Plastic case
- Longitudinal feed lever
- Plastic Spacer Rings, for cutting depth adjustment 0,5.....5 mm
- Two spare screws to secure the cutting blade



Description	Order-ref.	INT-Id.	length	width	height	
AIS cable stripper 16mm ( Set )	24480001	17190	390	330	105	1950
Replacement blade for AIS	244801	17192				
Feed lever for AIS	244803	17194				
Set replacement blades	244804	17192				
Replacement blade for AIS	244805	17192				

## FSI 150 – Overhead Cable Insulation Stripper

Designed to strip single-pole cables 6 - 150 mm<sup>2</sup>

Suitable for work under voltage 1000V AC or 1500 DC

### Technical characteristics:

- Stripping length adjustable from 20 to 80 mm
- Insulated handle with bayonet connection
- Stripping inserts for cross sections from 6 to 150 mm<sup>2</sup>
- Cutting direction indicated by an arrow on the insert
- Interchangeable, hardened blade
- Insulation in compliance with EN/IEC 60900:2004
- Can be used to -40°C



FSI 150 – Set – 1717 0



Insulated handle – 1717 1



Stripping insert – 1717 ...

### Example of application:



Insulated low voltage overhead cable with copper- or aluminium conductor and PVC- or PE-insulation

Description	Order ref.	INT-Id.	— mm —	⚖
FSI 150-Set	244340	17170	235x200x55	ca. 900
Replacement blade	244351	17179	-	-

consisting of:

Description	Order- ref.	INT-Id.
Insulated handle	244350	1717 1
Stripping Insert 16mm <sup>2</sup>	244316	1717 016
Stripping Insert 25mm <sup>2</sup>	244325	1717 025
Stripping Insert 35mm <sup>2</sup>	244335	1717 035
Stripping Insert 50mm <sup>2</sup>	244355	1717 050
Stripping Insert 54.6mm <sup>2</sup>	244354	1717 054
Stripping Insert 70mm <sup>2</sup>	244357	1717 070
3 Replacement blades	244351	1717 9
Hollow hexagon wrench 2.5mm	244643	1710 0
Plastic case with foam-insert	128935	-

additional available stripping inserts

Description	Order- ref.	INT-Id.
Stripping Insert 6mm <sup>2</sup>	244306	1717 006
Stripping Insert 10mm <sup>2</sup>	244310	1717 010
Stripping Insert 95mm <sup>2</sup>	244395	1717 095
Stripping Insert 150mm <sup>2</sup>	244315	1717 150

## FSI – Insulated wire stripper

Designed to strip flexible single-pole cables with 2.5 / 4 / 6 mm<sup>2</sup> cross sections and rigid single-pole cables with 10mm cross sections.

Suitable for work under voltage 1000V AC or 1500 V DC

### Technical characteristics:

- Stripping depth max. 20mm
- Blade built into the tool
- Cutting direction indicated by an arrow
- Insulation in compliance with EN/IEC 60900:2004
- Range of application till -10°C

### Set-Equipment:

- FSI in nylon case



Nylon case



### Example of application:



Insulated outdoor cable 10mm<sup>2</sup>



Insulated cable and stranded conductor 2.5 / 4 and 6mm<sup>2</sup>

Description	Order- ref.	INT-Id.	— mm —	⚖
FSI-Set	244370	AE6200	170x55x50	ca. 150

## Universal Insulation Removal Tool 11-22-33 kV

- **Not suitable for working under voltage**
- Designed for the removal of insulation on XLPE,PE,PVC,EPR (G7) insulated cables, in the voltage class 11, 22 and 33 kV having cross sections 10 -240 mm<sup>2</sup> and up to a max. Ø mm
- Facilitates removal of the primary insulation in a simple and safe way, together with the screen layer, without damaging the conductor
- Insulation removal length is adjustable in the range 20 - 100mm, in steps of 0.2 mm, by means of the adjustable control knob in the handle of the tool
- For each of the voltage 11, 22 and 33 kV a corresponding primary v-block insert must be inserted in the cutting head.
- Index marks for the following conductor cross sections are clearly shown on the adjustable spindle: 25,35,50,95,120,150,185 and 240 mm<sup>2</sup>
- A locking stop piece ensures the cables is securely held in position.
- The cutting blade is removable ( Part No: 244604). When blunt simply turn it around and use a second time
- Insulation can be removed down to ambient temperatures of -10° C.



V-block insert for 11, 22 and 33 kV



Stripping handle  
Order- ref. 125200



Stripping set  
Order- ref. 244610



Universal-stripping insert  
Order- ref. 244600

Description (mit Inhalt)	Order- ref.	— mm —	⚖
Stripping-tool set, 5-parts	244610	365x290x110	2255

consisting of:

Description	Order- ref.	⚖
Plastic case with padding for 244600	128925	100
Universal-Stripping insert 10/30 kV	244600	1930
V-block insert 10 kV for 244600	244601	45
V-block insert 20 kV for 244600	244602	35
V-block insert 30 kV for 244600	244603	25
Stripping handle	125200	220

## HLS – Cable Screen Cutter

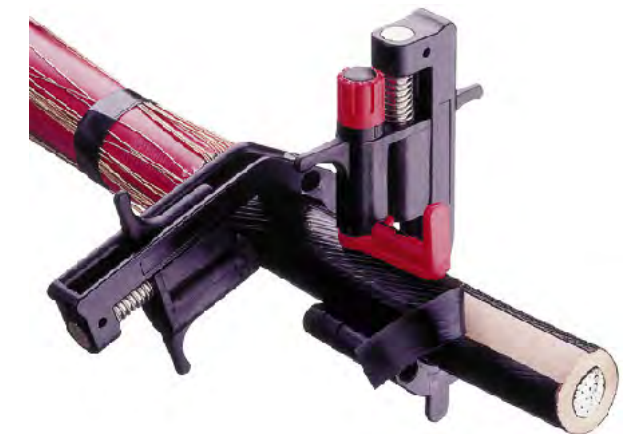
Designed to strip the non-vulcanized semiconductive layer of medium and high-voltage cables with insulation diameters from 16 to 41mm.

### Technical Characteristics:

- Longitudinal-, helical- and circular cut possible
- Positioned on the cable with a clamp system
- Stop clamp to limit the stripping length
- Step-by-step depth adjustment from 0 bis 0.9 mm (1matrix-click = 0.1 mm)
- By adjusting the of thecuttingdepth-position "0" you can reach a cutting depth up to 2 mm



HLS-Set



Cablefield limitation cutter



Mechanical stop

Description	Order-ref.	INT-Id.	— mm —	⚖
HLS-Set	244720	AV6400	250x160x55	ca. 600
Replacement blade for HLS	244723	AV6499	-	-

consisting of:

Description	Order- ref.	INT-Id.	Description	Order- ref.	INT-Id.
HLS Cablefield limitation cutter	244721	AV6410	Stop clamp	244722	AV6411
Siliconegel	244702	AG1013	Plastic case	244724	AB6400

## FBS – Semi-Conducting Screen Removal Tool

### For removal of the vulcanised semi-conducting screen

Up to 1.5mm thick on Medium and High Voltage cables having thickness of insulation in the range 10 - 52 mm.

#### Technical characteristics:

- Anodised Aluminium construction provides an extremely light and robust tool
- Contact surfaces are coated to provide low frictional resistance
- The change over lever allows activation/de-activation of axial movement
- Removal of the screen can start or stop at any point required
- Axial movement in **both** directions possible
- The shape of the blade ensures that the end of the screen layer will always be conical
- Blade of temperd steel
- Cutting depth using special blade with Stripping depth with 17°-cone from 0 till 1,5 mm adjustabel
- Cutting depth can be **limited** or **blocked**
- Very small rotation dia of 220 mm max.
- Shaved screen deflected away using the guiding device on the tool



#### Example of application:




Medium and High Voltage cables with extruded insulation and vulcanised semi-conducting.



FBS-Set – 1722 0



FBS – 1722 1

Description	Order-ref.	INT-Id.	— mm —	
FBS-Set	24471001	1722 0	235x200x55	ca. 800
Replaceable blade 17°	244701	1714 2	-	-

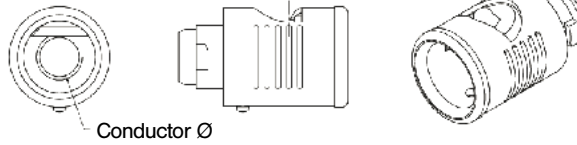
consisting of:

Description	Order- ref..	INT-ID.
FBS - Cablefield limitation stripper	24470001	1722 1
Siliconegel	244702	AG1013
Hollow hexagon wrench 2,5mm (for changing bladell)	244643	1710 0
Plastic case	128930	-

## Universal Cable Stripping Tool (IMS) 10kV/20kV

### Not suitable for work under voltage

- For stripping internal insulation coatings (MS cables)
- Handle adjustable according to length of stripping replaceable cutter heads for different cross sections of insulation coatings
- Replaceable cutter heads for different wire cross sections or insulation coatings
- Custom design available
- ▶ By inquiry, cable type and cross section declare



Description	Order. ref.	INT-Id.	Voltage-class cable	PE-Coating Ø mm	Conductor Ø mm	⚖
Stripping handle - usable for all Stripping Insert.	125200	AV6300				200
Replaceable blade for stripping inserts	130000	AV6399				
<b>Insert for 20 kV Cable</b>						
Stripping Insert 25 mm <sup>2</sup> for Stripping handle	130002	AV63025	20	19,3	6,3	80
Stripping Insert 35 mm <sup>2</sup> for Stripping handle	130003	AV63035	20	20,7	7,4	80
Stripping Insert 50 mm <sup>2</sup> for Stripping handle	130005	AV63050	20	21,6	8,3	80
Stripping Insert 70 mm <sup>2</sup> for Stripping handle	130007	AV63070	20	23,3	10,1	80
Stripping Insert 95 mm <sup>2</sup> for Stripping handle	130009	AV63095	20	25,0	11,6	80
Stripping Insert 120 mm <sup>2</sup> for Stripping handle	130012	AV63120	20	26,6	13,4	80
Stripping Insert 150 mm <sup>2</sup> for Stripping handle	130015	AV63150	20	27,9	14,4	80
Stripping Insert 185 mm <sup>2</sup> for Stripping handle	130018	AV63185	20	29,8	16,5	80
Stripping Insert 240 mm <sup>2</sup> for Stripping handle	130024	AV63240	20	32,0	18,6	80
<b>Special-Insert for 10 kV Cable</b>						
Stripping Insert 35 mm <sup>2</sup> for Stripping handle	130035	1716021	10	15,7	7,1	80
Stripping Insert 50 mm <sup>2</sup> for Stripping handle	130050	1716024	10	17,5	8,2	80
Stripping Insert 95E mm <sup>2</sup> for Stripping handle	130045	1716002	10	19,0	10,7	80
Stripping Insert 120 mm <sup>2</sup> for Stripping handle	130091	1716013	10	22,3	13,15	80
Stripping Insert 150E mm <sup>2</sup> for Stripping handle	130065	1716003	10	22,5	13,3	80
Stripping Insert 150 mm <sup>2</sup> for Stripping handle	130092	1716027	10	23,4	14,3	80
Stripping Insert 185 mm <sup>2</sup> for Stripping handle	130093	1716020	10	25,4	16,2	80
Stripping Insert 240 mm <sup>2</sup> for Stripping handle	130090	1716006	10	27,8	18,4	80
<b>Special-Insert for 30 kV Cable</b>						
Stripping Insert 150E mm <sup>2</sup> for Stripping handle	130040	1716011	30	29,8	14,7	80

- ▶ the stripping inserts are normally for stranded conductors , except inserts with identifier "E", these ones are for single conductors.

## Stripping Tool Set

- for helical stripping of the internal insulation coatings- of HV-Cable
- handle adjustable according to length of stripping
- replaceable cutter heads for different wire cross sections or insulation coatings - only for 20 kV cable
- also for 10 kV available



Description	Order. ref.	INT-Id.	Length	Width	Height	⚖
Stripping-Tool Set, 11-parts.	244480	AV 6320	340	260	70	1800

consisting of:

Description	Order-ref.	Description	Order-ref.
Plastic Case red with Foam Padding	128920	Stripping Insert 70mm <sup>2</sup>	130007
Stripping Handle without Insert	125200	Stripping Insert 95mm <sup>2</sup>	130009
Universal Cable Stripping Tool	244500	Stripping Insert 120mm <sup>2</sup>	130012
Stripping Insert 25mm <sup>2</sup>	130002	Stripping Insert 150mm <sup>2</sup>	130015
Stripping Insert 35mm <sup>2</sup>	130003	Stripping Insert 185mm <sup>2</sup>	130018
Stripping Insert 50mm <sup>2</sup>	130005	Stripping Insert 240mm <sup>2</sup>	130024

## IMS II – Internal insulation cutting Tool

For removal of the primary insulation up to 15 mm insulation thickness on medium voltage cables (6 - 45kV) with diameters from 15 till 52 mm.

### Technical characteristics:

- Anodised Aluminium construction provides an extremely light and robust tool
- Contact surfaces are coated to provide low frictional resistance
- The clamping system locks the tool precisely on the cable
- For removal of insulation at terminations
- Spiral or straight cut possible
- Forward feed can be adjusted in 5 steps
- Cutting depth selectable 0-15 mm
- Any required length of insulation can be removed. Insulation removal can be terminated at any selected point
- Replaceable hardened steel blade
- Rotation diameter max 220 mm



### Example of application:



MS cable 22kV  
(XLPE-PVC-PE insulation)

Description	Order- ref.	INT-Id.	— mm —	⚖
IMS II-Set	244640	1723 0	275x220x65	ca. 1000
Replacement blade	244642	1723 2	-	-

consisting of:

Description	Order- ref.	INT-Id.
Internal cable sheath cutter IMS II	244641	1723 1
Silicongel	244702	AG1013

Description	Order- ref.	INT-Id.
Hollow hexagon wrench 2,5mm	244643	1710 0
Plastic case with foam inlay	128940	-

## UFS – Chamfer cutter

To make chamfer cuts of the primary insulation, of medium-voltage-cables having primary insulation diameters of 15 till 60 mm.

### Technical characteristics:

- Anodised Aluminium construction provides an extremely light and robust tool
- For chamfering the primary insulation (2 chamfers of 60°)
- The clamping system locks the tool precisely on the cable
- Silicon Gel is not required
- Replaceable hardened steel blade
- Rotation diameter max. 220 mm



### Example of application:



Medium Voltage Cable 22kV  
(XLPE-PVC-PE insulation)

Description	Order- ref.	INT-Id.	— mm —	⚖
UFS-Set (with nyloncase)	244630	1724 0	170x50x90	ca. 390
UFS-Chamfer cutter	244631	1724 1	140x27x85	ca. 375
Replacement blade	244632	1724 2	-	-
Socket wrench 2.5 mm to change blade	244643	1710 0	-	-

## AIS-AIRBAG-Set

Designed for the removal of the individual insulation layers on Pirelli AIRBAG cables. The AIS AIRBAG set enables the removal of the outer sheath without damaging the semiconducting layer below.

### Application:

For removal of the outer Polyalm sheath with a thickness of 1.3mm on AIRBAG cables having an outer diameter in the range 16 - 52 mm. Designed for working under voltage under voltage up to 1000V AC or 1500V DC.


### Technical characteristics:

- Longitudinal- and circular cut
- For removal of insulation at ends and mid - way points
- Cutting depth especially designed for AIRBAG-cables
- Cutting depths can be adjusted using colour coded plastic spacer rings in steps of 0.5...5.0 mm
- Gripping jaws for removal the stripped sheath
- Turning the tool around 180° enables a 360° cut to be made
- Safe movement of the tool along the cable in both directions using the ratchet lever
- Replaceable insulated blade (also insulated between each other)
- Two component handles EN/IEC60900
- Can be used down to -40°C



AIS-AIRBAG-Set - 1720 0



Description	Order- ref.	INT-Id.	— mm —	
AIS-AIRBAG-Set-standard	244810	17200	390x330x90	ca. 3200
AIS-AIRBAG-Set-reduced	244811	17201	390x330x90	ca. 1950

consisting of:

Description	Order- ref.	INT-Id.
AIS AIRBAG - cable stripper	24480002	17198
Feed lever	244803	17194
2 replacement-clamping screws for blade	244802	17197
Set replacement blades	244804	17199
Cable sheath cutter (AMS)	244500	AV6220
FBS - Cablefield limitation stripper	24470001	17221
Stripping handle without insert IMS 20kV	125200	AV6300
Stripping insert 70mm <sup>2</sup>	130100	1716012
Stripping insert 185mm <sup>2</sup>	130101	1716010

consisting of:

Description	Order- ref.	INT-Id.
AIS AIRBAG cable stripper	244811	17198
Feed lever	244803	17194
2 replacement-clamping screws for blade	244802	17197
Set replacement blades	244804	17199

Description	Order- ref.	INT-Id.
Replacement blade IMS	130000	AV6399
Cable Jointers Knife with repl. blade	281510	AV3910
Replacement blade for 281510	281511	AV3911
Electrician scissor	272010	16011
Expanding wedge	652002	6652002
Silicongel	244702	AG1013
Hexagon socket wrench 2.5mm	244643	17100
Plastic case with foam padding	128945	

Description	Order-ref.	INT-Id.
Stripping insert 70mm <sup>2</sup>	130100	1716012
Stripping insert 185mm <sup>2</sup>	130101	1716010
Hexagon socket wrench 2.5mm	244643	17100
Plastic case with foam padding	128945	

## Stripping Tool – Set 1

Designed for strip the outer sheath, the screen and the primary insulation of circular conductors.



Description	Order- ref.	INT-Id.	— mm —	⚖
Stripping tool-Set 1	244900	1799 001	390x330x90	ca. 4000

consisting of:

Description	Order- ref.	INT-Id.
AIS cable stripper 16-52 mm	24480001	1719 6
ratchet lever	244803	1719 4
Plastic spacer rings	-	-
2 replacement-clamping screws for blade	244802	1719 7
FBS - Cablefield limitation stripper	24470001	1722 1

Description	Order- ref.	INT-Id.
Internal cable sheath cutter IMS II	244641	1723 1
Siliconegel	244702	AG1013
Hollow hexagon wrench 2,5mm	244643	1710 0
Plastic case with Schaumstoffeinlage	128950	1799 000

## Stripping Tool – Set 2

Designed for strip the outer sheath, the screen and the primary insulation of circular conductors.



Description	Order- ref.	INT-Id.	— mm —	⚖
Stripping tool-Set 2	244950	1799 002	390x330x90	ca. 3000

consisting of:

Description	Order- ref.	INT-Id.
Cable sheath cutter universal (AMS)	244500	AV6221
FBS - Cablefield limitation stripper	24470001	1722 1
Internal cable sheath cutter IMS II	244641	1723 1
Siliconegel	244702	AG1013
Special electrician scissor	272010	1601 1
Cable Jointers Knife with repl. blade	281500	AV3920
Plastic case with foam padding	128955	AG3000

consisting of:

Description	Order- ref.	INT-Id.
Stripping handle IMS 20kV	125200	AV6300
4 Inserts for selection (see Page 29)	130...	AV36...

## Safetytool Set for Cable Jointing Low-Voltage

- Plastic case, ABS, black
- Cable jointer's toolset with foam padding
- Suitable for cable sleeves and house connection line installations on polymeric cables.



Description (with content)	Order- ref.	Length	Width	Height	⚖️
Safetytool set for cable installation	750026	440	310	100	6000

Description	Order ref.
Plastic case, black, empty,	750017
Foam padding for 750017	750027
AIS cable stripper 26-52 mm	24480001
Light Hammer Size 1/25, non rebound, insulated	410322
Engineers pliers 180 mm	216318
Sidecutterr 180 mm	236318
Round cable cutter VDE Cu/Al 35mm <sup>2</sup> max.	254316
Alignment tool 95-150mm <sup>2</sup> 3/8" insulated.	132095
Alignment tool 185-240mm <sup>2</sup> 3/8" insulated.	132185
T-bar allen key 5 mm, 200 x 70 mm	117972
T-bar allen key 6 mm, 200 x 90 mm	117970
Ratchet lever 3/8"	131338

Description	Order ref.
Socket Piece 13 mm 3/8" standard hexagon	130213
Socket Piece 17 mm 3/8" standard hexagon	130217
Socket Piece 19 mm 3/8" standard hexagon	130219
Socket Piece 22 mm 3/8" standard hexagon	130222
Insert 5,0 x 85 mm 3/8" for inside hexagon	140305
Insert 6,0 x 85 mm 3/8" for inside hexagon	140306
Insert 8,0 x 85 mm 3/8" for inside hexagon	140308
Expanding wedge of plastic, 170 mm, red	652003
Expanding wedge of plastic, 240 mm, with slot, red	652006
Screwdriver 0,4 x 2,5 x 75 mm	111525
Screwdriver 0,8 x 4,0 x 125 mm	111341

## Safetytool Set for Cable Jointing Medium Voltage

- Plastic case, ABS, red
- With foam padding for set stripping tool
- Suitable to strip the outer sheath, the cablefield limitation ,and the primary isolation



Description (with content)	Order- ref.	Length	Width	Height	⚖️
Safetytool set stripping-tool	750035	420	280	100	6000

Description	Order ref.
Plastic case, empty, red	750021
Foam padding stripping tool for 750021	750024
AIS cable stripper 26mm	24480001
Plastic-spacer-rings for 244800 (1,5; 2; 2,5; 3; 3,5 mm)	
Cable sheath cutter-universal (AMS)	244500
FBS - Cablefield limitation stripper	24470001
Siliconegel	244702
Kantenschneider 35-300 mm <sup>2</sup>	244770
IMS 2 - internal cable sheat cutter	244641

Description	Order ref.
Stripping handle without insert	125200
Stripping insert for 20 kV Kabel - 95 mm <sup>2</sup>	130009
Stripping insert for 20 kV Kabel - 120 mm <sup>2</sup>	130012
Stripping insert for 20 kV Kabel - 150 mm <sup>2</sup>	130015
Stripping insert for 20 kV Kabel - 185 mm <sup>2</sup>	130018
Stripping insert for 20 kV Kabel - 240 mm <sup>2</sup>	130024
Screwdriver PH1	113501
Electrician scissors 40mm	272010
Cable jointers knife with replaceable blade	281500

**Cable Jointers Knife  
(with safety cap)**

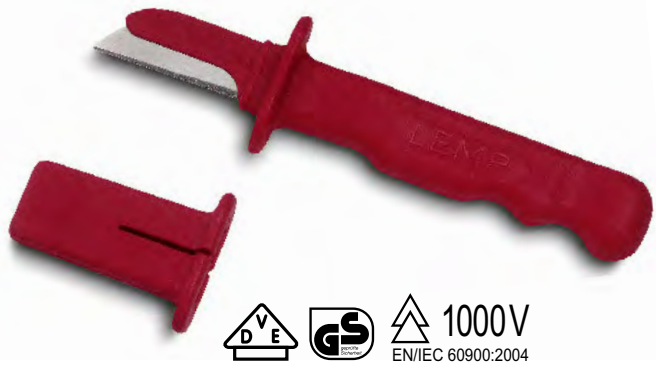
- Moulded easy grip handle
- Strong fixed blade
- Blade of tempered stainless steel
- Insulation of tough non-brittle plastic



Description	Order-ref.	—mm—	Length of blade	⚖
Cable Knife with safety cap	281300	180	50	80

**Cable Jointers Knife  
(with safety cap)**

- Moulded easy grip handle
- Strong fixed blade
- Back of blade coated
- Blade of tempered stainless steel
- Insulation of tough non-brittle plastic



Description	Order-ref.	—mm—	Length of blade	⚖
Cable Knife with insulated blade	281310	180	50	80

**Cable Jointers Knife with integrated blade safety guard and replaceable blade**

- Straight solid blade with coated back
- Blade of tempered stainless steel
- Ergonomic handle of impact resistant plastic
- Collapsible blade safety guard, firmly fixed to handle
- With replaceable blade  
(Blade must change with adapter)



Description	Order-ref.	INT-Id.	—mm—	Length of blade	⚖
Cable Jointers Knife with replaceable blade	281500	AV3920	200	50	70
Replacement blade for 281500	281501	AV3921	80	50	20

**Cable Jointers Knife with integrated blade safety guard and replaceable blade**

- Commercial tapered blade
- Ergonomic handle of impact resistant plastic
- Collapsible blade safety guard, firmly fixed to handle
- With replaceable blade  
(Blade and adapter can be changed separately)



Description	Order-ref.	INT-Id.	—mm—	Length of blade	⚖
Cable Jointers Knife with replaceable tapered blade	281510	AV3910	200	50	70
Replacement blade for 281510	281511	AV3911	--	50	15
Replacement plastic insert for 281510	281512	K3910-01	75		7

### Insulated Cable Knife integrated blade safety guard and replaceable ceramic blade

- Fully insulated
- For removal of cable insulation
- Ergonomic handle of impact resistant plastic
- Collapsible blade safety guard, firmly fixed to handle
- With replaceable blade  
(Blade must be changed with adapter)



Description	Order ref.	INT-Id.	mm	Length of blade	
Cable knife with replaceable ceramic blade	281550	AV3930	185	46mm	56

### Cable Knife (with safety cap)

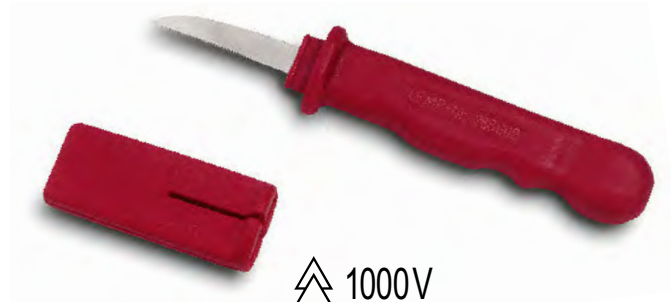
- Special blade with guide blade prevents damage of conductor strands
- For removal of insulation and sheath
- Blade and back sharpened
- Blade of tempered stainless steel
- Insulation of tough non-brittle plastic



Description	Order-ref.	mm	Length of blade	
Cable knife with safety cap	288700	175	47	65

### Cable and Paper Knife (with safety cap)

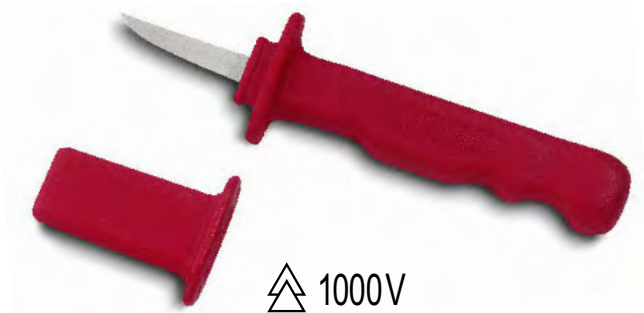
- Narrow, straight blade
- Small handle
- For delicate work
- Blade of tempered stainless steel
- Insulation of tough non-brittle plastic



Description	Order-ref.	mm	Length of blade	
Phase stripping knife	288600	170	50	65

### Gutta Percha Knife (with safety cap)

- Robust blade with arched knife edge
- Ergonomical handle
- Blade of tempered stainless steel
- Insulation of tough non-brittle plastic



Description	Order-ref.	mm	Length of blade	
Gutta-percha knife	286600	180	50	80

**Cable and Paper Knife  
(with safety cap)**

- Curved blade
- Small handle
- For delicate work
- Blade of tempered stainless steel
- Insulation of tough non-brittle plastic



Description	Order- ref.	mm	Length of blade	
Cable- and paper knife	283600	170	50	65

**Cable Stripping Knife  
(with safety cap)**

- Short, angled blade
- Small handle
- Special blade for delicate cable work
- Blade of tempered stainless steel
- Insulation of tough non-brittle plastic



Description	Order- ref.	mm	Length of blade	
Cable stripping knife	288900	160	43	65

**Cable Stripping Knife  
(with safety cap)**

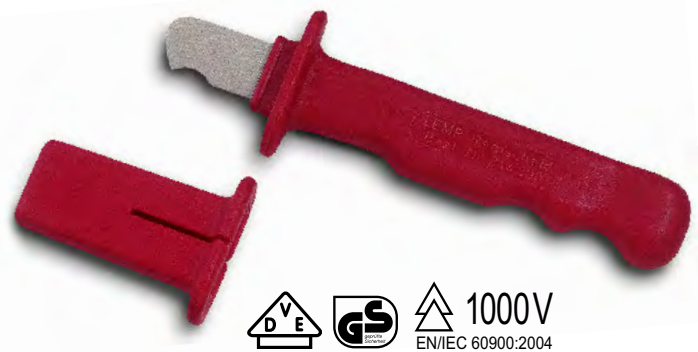
- Short, strong semi circular blade
- Blade of tempered stainless steel
- Insulation of tough non-brittle plastic



Description	Order- ref.	mm	Length of blade	
Cable stripping knife	288800	170	38	70

**Insulation Removal Knife  
(with safety cap)**

- Moulded easy grip handle
- Strong hook blade
- Blade of tempered stainless steel
- Insulation of tough non-brittle plastic



Description	Order- ref.	mm	Length of blade	
Insulation removal knife with safety cap	244300	160	35	80

**Jokari Insulation Removal Knife with Hook Blade**

- Not suitable to use for work under voltage
- Knife with sheath stripping device for NYM 2 x 1.5 - 4 x 25 mm<sup>2</sup>
- Spare blades with special cutting edge for rubber, PVC and flexible cable
- Cutting depth can be set by adjusting screw on handle



Description	Order- ref.	mm	Length of blade	
Jokari insulation removal knife with hook blade	287000	170	25	100

### Cable Knife with fixed Blade

- Wooden handle
- Heavy duty blade of stainless steel



Description	Order-ref.	mm	Handle length	Length of blade	
Cable knife with fixed blade	281000	190	115	75	40

### Cable Knife with fixed Blade

- Heavy duty fixed blade
- Wooden handle, triple brass rivets
- Various other handles available



Description	Order-ref.	mm	Handle length	Length of blade	
Cable Knife with Wooden Handle	283000	210	110	100	95
Cable Knife with Leather Handle (heavy duty)	283001	190	100	90	185
Cable Knife with Wooden Handle (heavy duty)	283002	190	100	90	190

### Gutta - Percha Knife

- Fixed, strong and very sharp blade
- Wooden handle



Description	Order-ref.	mm	Handle Length	Length of Blade	
Gutta-Percha Knife	286000	195	115	80	40

### Cable Knife

- One-piece blade, collapsible
- Especially strong blade with wire scraper
- Wooden handle
- Solid steel fittings



Description	Order-ref.	mm	Handle Length	Length of Blade	
Cable Knife, 1 Blade	282001	200	110	90	80

### Cable Knife

- Two or three-piece, collapsible
- Strong blade and spike tool
- Wooden handle
- Solid steel fittings
- Three piece collapsible with screwdriver



Description	Order-ref.	mm	Handle Length	Length of Blade	
Cable Knife, 2 piece	282002	160	90	70	85
Cable Knife, 3 piece	282003	175	100	75	90

### Special Electrician's Scissors

- Ergonomical and extremely robust
- High cutting performance
- Loose-free screw/pin fixing
- **Attention: not suitable for work under voltage**



Description	Order- ref.	INT-Id.	—mm—	Blade	⚖
Special electrician scissor	272010	1601 1	140	straight	68

### Special Electrician's Scissors 2K

- Ergonomical and extremely robust
- High cutting performance, optimized tooting
- Loose-free screw/pin fixing
- 2-component-handles
- **Attention: not suitable for work under voltage**



Description	Order- ref.	INT-Id.	—mm—	Blade	⚖
Special electrician scissor 2K	272012	1601 2	140	straight	60

### Special Electr. Scissors 2K with Electric Fields Tester

- Electric voltage field is indicated with a red LED
- Voltage range 50...1000V AC
- Temperature -10/+50°C, humidity 20-90%
- It is not necessary to make galvanic contact with the conductor
- The LED will illuminate when the blades are close to a live conductor
- 2-component-handles
- Excellent cutting edge optimised with toothed blade
- Secure adjustable screw swivel joint
- 2 replaceable circular cell batteries LR4/AG3/392 - 1,5V
- **Caution: Not intended for use under voltage.**  
*The voltage indication will not show on screened cables*



Description	Order- ref.	INT-Id.	—mm—	Blade	⚖
Special electrician scissor 2K	272014	1601 5	140	straight	66

### Cable Cutter Electrician Scissor 2K

- Ergonomical and extremely robust
- high cutting performance, optimized tooting
- loose-free screw/pin fixing
- 2-component-handles
- ergonomic and extra robust
- ergonomic and extra robust
- with special Safetybox
- **Attention: not suitable for work under voltage**



Description	Order- ref.	INT-Id.	—mm—	Blade	⚖
Cable Cutter electrician scissor 2K	272016	16020-F1	150	straight	98

### Safetybox for Special Electrician Scissors

- Scissors and worker are fully protected
- Ergonomical and fast work
- With integrated scissors holding device
- Suitable for all interchangeable scissors
- With belt safety clip



Bezeichnung	Best. Nr.	INT-Id.	—mm—	⚖
Safety Box	272015	1601 9	12x7	30

## Insulated Electrician's Shears

- Readjustable screwjoint
- High cutting performance
- Surface treatment: burnished and polished
- 2-component-handles
- Can be used down to -40°C



Description	Order-ref.	INT-Id.	— mm —	Blade	⚖
Insulated electrician scissor	272020	1603 1	180	straight	100

## Hacksaw

- Made of flat steel 10 x 5 mm, galvanized
- For 148 mm saw-blades
- With insulated rotary handle for blade tension
- Insulation of soft, non-brittle plastic
- **Attention: not suitable for work under voltage**



Description	Order-ref.	— mm —	Width	Thickness	⚖
Hacksaw / 150 mm Saw-blade	424200	280			230
Spare Saw-blade for 424200	433010	150	5	0.80	3

## Hacksaw

- With insulated wing bolt for blade tension
- Insulation of soft, non-brittle plastic
- Saw-blade no. 421000 can be ordered separately
- **Attention: not suitable for work under voltage**



Description	Order-ref.	— mm —	Width	Thickness	⚖
Hacksaw / 150 mm Saw-blade	424300	470			660
Spare Saw-blade 22/32 teeth for 424300	421000	300	13	0.63	17
Spare Saw-blade 16 teeth for 424300	421016	300	13	0.63	17
Spare Saw-blade double-sided 22/32 teeth	421920	300	25	0.80	40

## Cable Sheath Saw, fully insulated

- For steel strip armoured cable
- Adjustable stopper
- Replaceable saw-blade
- Coarse toothed saw-blade for soft materials
- Fine toothed saw-blade for sheet metal cutting without details we deliver saw-blade no. 430805
- Insulation of tough non-brittle plastic



Description	Order-ref.	— mm —	Blade Length	⚖
Cable sheath saw (24 teeth, fine)	430302	250	120	140
Spare Saw-blade (14 teeth, coarse)	430801		120	6
Spare Saw-blade (24 teeth, fine)	430805		120	6

### Puk Saw, collapsible

- Adjustable handle (all sides) for use in places of limited accessibility
- Metal bow, nickel-plated
- With fitted universal saw-blade for cutting common materials, no cutting ridges



Description	Order-ref.	Blade length	⚖️
Puk-Taschensäge, klappbar	433000	150	140

### Puk Saw

- With fixed wooden handle, red
- Metal bow, zinc-plated
- With fitted universal saw-blade for cutting common materials, no cutting ridges



Description	Order-ref.	Blade length	⚖️
Puk-Saw with fixed handle	433005	150	110
Puk-Spare Saw-blade for metal	433010	-	10

### Wood Saw

- Oval tube 27/17 mm
- Varnished
- Blue saw-blade
- Fixed



Description	Order-ref.	Blade Length	⚖️
Saw	432045	450	600
Saw, heavy	434076	760	1000
Spare Saw-blade for 432045	432845	450	50
Spare Saw-blade for 434076	434876	760	90

### Saw with Telescopic Rod

- With blade holder
- Solid aluminium telescopic rod
- Anodized
- Stepless adjustment from 150 - 300 mm



Description	Order-ref.	—mm—	⚖️
Saw with Telescopic Rod	435835	350	1500

## Conduit-Cutter

This universal conduit cutter is ideal for precision cutting of skirting, wall, and cable conduits as well as equipment holders made of resin, as well as resin sheets and pipes, flat cables and rubber and wood shaped sections (not metal).



### Straight insert

(in plastic)  
for all cutting jobs on flat materials such as (various kinds of) conduits, sheeting, belts, and flat and shaped cables cablesphun



### Angled insert 45 – 120°:

(in plastic)  
with 45° guide and markings with reference lines for 45°, 60°, 75°, 90°, 105° and 120° for oblique and angled cuts.



### 90° shaped insert:

(in aluminium)  
for cutting small conduits up to 25 mm x 45 mm and for pipes and hoses, even with thick walls, up to 25 mm diameter.



### Insert for 16-19-25 mm pipes:

(in aluminium)  
with 3 semi-circular guides for cutting 16 mm (5/8") Ø, 19 mm (3/4") Ø, and 25 mm (1") Ø pipes and hoses.

### Technical-Characteristics:

- the particular way the blade is sharpened and the geometry of the cutter itself guarantees a precise cut, free of burrs.
- the new Intercable inserts, in impact-resistant resin, ensure a high cutting capacity with very little effort.
- the new system for fixing the changeable inserts does not require any additional tools and guarantees quick replacement. To change resin inserts, simply slacken the locking screw.
- cutting length: max 57 mm
- cutting blade made of special tempered steel (hardness 52HRC)
- cutter opening by built-in spring (locked in position by a lever)
- **Attention: not suitable for work under voltage**



Description	Order- ref.	INT-Id.	Dimensions	⚖
Set-conduit cutter - straight insert - angled insert 45-120° - 90° shaped insert - insert for 16-19-25 mm pipes	274150	1626 0	240x220x80	ca. 750



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### Spanners, Socket Sets, Screwdriver

- Ratchet Lever, Cross Socket Set, Torque tools
- Socket Spanner Insert, Allen Key Inserts
- Openended Ring Spanner, Reversible Ring Ratchet Lever
- Screwdriver, Switch Cabinet Spanner
- Nut Holder



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## Insulated Socket Drive Sets

### with square end for hand operated socket spanner inserts

- These multi application insulated tools are supplied with a 3/8" or 1/2" drive.
- The double ball bearing fixing of the inserts developed by us as well as the expanding ball interlock system on the ratchet lever and the T Shaped lever are features of safety and reliability when in use. (Patent applied for).

### T Shaped Lever DIN 7436

- Made of alloyed and hardened steel
- The square end has a device making an interlocking connection with the aid of a screw
- Professional multi-coated insulation
- Cannot be used for screwdriver heads for hex. bolts

Inserts see Page 47-49



Description	Order- ref.			
T-Shaped Lever 3/8"	125402	165	200	350
T-Shaped Lever 1/2"	125302	165	200	380

### T-Shaped Lever Universal DIN 7436 for hand operated sockets

- Made of alloyed and hardened steel
- The square end has a device making an interlocking connection with the aid of a sliding collar
- Insulation of shock proofed plastic
- Suitable for all screwdriver heads

Inserts see Page 50



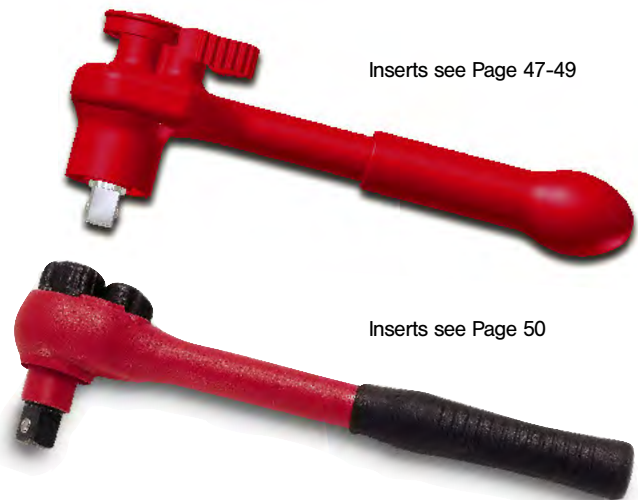
Description	Order- ref.	INT-Id.			
T-Shaped Lever Universal 3/8"	125802	15012	160	195	240
T-Shaped Lever Universal 1/2"	125702	15011	160	210	420

### Ratchet Lever DIN 7449

- Made of alloyed and hardened steel
- The square end has a device making an interlocking connection with the aid of a button
- Change of direction by knob
- Professional multi-coated insulation or
- Suitable for all types of screwdriver heads

Inserts see Page 47-49

Inserts see Page 50



Description	Order- ref.	INT-Id.			
Ratchet Lever 3/8"	131338		200	70	310
Ratchet Lever 1/2"	131312		260	80	660
Ratchet Lever 3/8"	2131338	15022	200	65	250
Ratchet Lever 1/2"	2131312	15021	255	75	530

### Extension Piece DIN 7434 with automatic locking system

- Made of alloyed steel
- Fixing of inserts by expanding ball
- The locking mechanism makes it possible to fit together several extension pieces and screwdriver bits.
- Automatic locking mechanism for tool to be used, the following has to be observed:  
Insert to be slide over extension piece first, then tool to be fixed on
- Professional multi-coated insulation

► Suitable for all types of screwdriver heads



Description	Order- ref.	Drive		
Extension Piece with automatic locking system	132412	3/8"	125	140
Extension Piece with automatic locking system	132425	3/8"	250	300
Extension Piece with automatic locking system	133412	1/2"	125	200
Extension Piece with automatic locking system	133425	1/2"	250	400

### Extension Piece DIN 7434

- Made of alloyed steel
- Fixing of inserts by expanding ball
- Expanding ball bearings by means of threaded pin
- Professional multi-coated insulation

► Screwdriver heads for hex. socket screws cannot be used



Description	Order- ref.	Drive		
Extension Piece	132312	3/8"	125	150
Extension Piece	132325	3/8"	250	290
Extension Piece	133312	1/2"	125	220
Extension Piece	133325	1/2"	250	380

### Extension Piece DIN 7434 with automatic locking system

- Made of alloyed steel
- Fixing of inserts by expanding ball
- Expanding ball bearings by means of threaded pin
- Insulation of shock proof plastic
- Suitable for all types of screwdriver heads
- Patented lock device that guarantees a coupling in compliance with DIN EN 60900, Standards for any brush carrying a square fitting according to ISO-DIS 1174-1/DIN 3120 Standard.



Description	Order- ref.	INT-Id.	Drive		
Extension piece with auto. locking system	2132412	15032125	3/8"	125	140
Extension piece with auto. locking system	2132425	15032250	3/8"	250	300
Extension piece with auto. locking system	2133412	15031125	1/2"	125	200
Extension piece with auto. locking system	2133425	15031250	1/2"	250	400
Reducing Adapter 1/2" to 3/8"	2132212	15031238		125	145

## Insulated Socket Drive Sets




### with torque mechanism

- A spring-loaded coupling for these drive sets was developed, ensuring adequate mechanism accuracy - even in a confined space - with simultaneous different rotary motion. The mechanism is clearly noticeable and can be heard even in noisy surroundings.
- Mechanism accuracy is  $\pm 10\%$  of the nominal value.
- ▶ All torque wrenches checked on traceables testers and can if applicable recalibrate.

### Fixed Torque Ratchet with separate coupling for clockwise turning

- Made of alloyed and hardened steel
- Square end with ball blocking and pull pin
- Right-hand and left-hand turning with 3/8" head
- Factory-adjusted torque
- Unrestricted anticlockwise turning
- Professional multi-coated insulation
- Suitable for all types of screwdriver heads






Description	Order- ref.	Selected Torque			
Fixed Torque Ratchet 3/8"	131808	8 Nm	195	72	400
Fixed Torque Ratchet 3/8"	131815	15 Nm	195	72	400
Fixed Torque Ratchet 3/8"	131820	20 Nm	195	72	400
Fixed Torque Ratchet 3/8"	131825	25 Nm	195	72	400

### Adjustable Torque Ratchet

- Made of alloyed and hardened steel
- Anticlockwise rotation without limitation
- Adjustable torque
- Professional multi-coated insulation
- When adjusted setting is achieved, the ratchet head drops sideways, which can be felt and heard
- Please observe operating instructions
- Suitable for all types of screwdriver heads
- Adjustment tolerance can be  $\pm 10\%$  of the nominal value



Description	Order- ref.	Ajustable Torque	Drive			
Adjustable Torque Ratchet 1/2"	131911	10 -50 Nm	1/2"	280	75	950
Adjustable Torque Ratchet 1/2"	131912	10 -50 Nm	1/2"	350	75	950
Adjustable Torque Ratchet 3/8"	131937	10 -50 Nm	3/8"	280	75	900
Adjustable Torque Ratchet 3/8"	131938	10 -50 Nm	3/8"	350	75	900
Adjustable Torque Ratchet 1/2"	131931	30 -130 Nm	1/2"	465	75	1300



### Socket Spanner Insert 3/8" square socket for hexagon bolts

- LEMP insulated inserts are available in four lengths
- The unusually wide range of attachment pieces has greatly extended the application of these tools
- Standard inserts for hex. screws are available on request with a 'nut retainer'
- All inserts are made of alloyed and hardened steel
- Professional multi-coated insulation

Nut retainer



Description	Order- ref.	Drive	△
Insert with Nut Retainer SW 10	9130210	3/8"	60
Insert with Nut Retainer SW 13	9130213	3/8"	60
Insert with Nut Retainer SW 17	9130217	3/8"	70
Insert with Nut Retainer SW 19	9130219	3/8"	80

### Socket Spanner Insert DIN 7448, standard available in hex. or double hex.

- Standard length 40 mm



### Socket Spanner Insert DIN 7448, extra deep available in hex. and double hex.

- Extra deep 70 mm



### Socket Spanner Insert, long double hex.

- Long type 125 mm shaft



### Socket Spanner Insert, extra long double hex.

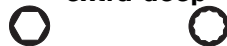
- Extra long type 250 mm shaft



normal



extra deep



long



extra long



Size	Order-ref.	Order- ref.	△	Order- ref.	Order- ref.	△	Order- ref.	△	Order ref.	△
SW 6	130206	135206	22							
SW 7	130207	135207	23							
SW 8	130208	135208	25	130308	135308	50				
SW 9	130209	135209	28	130309	135309	55				
SW 10	130210	135210	57	130310	135310	63	135110	140	135710	280
SW 11	130211	135211	28	130311	135311	67	135111	148	135711	280
SW 12	130212	135212	30	130312	135312	70	135112	152	135712	287
SW 13	130213	135213	33	130313	135313	77	135113	161	135713	295
SW 14	130214	135214	34	130314	135314	85	135114	173	135714	300
SW 15	130215	135215	38	130315	135315	100	135115	180	135715	315
SW 16	130216	135216	43	130316	135316	113	135116	195	135716	326
SW 17	130217	135217	48	130317	135317	122	135117	205	135717	351
SW 18	130218	135218	53	130318	135318	130	135118	213	135718	370
SW 19	130219	135219	56	130319	135319	144	135119	223	135719	385
SW 20	130220	135220	70	130320	135320	150	135120	230	135720	405
SW 21	130221	135221	83	130321	135321	160	135121	238	135721	420
SW 22	130222	135222	95	130322	135322	185	135122	250	135722	445
SW 23				130323	135323	210				
SW 24	130224	135224	112	130324	135324	250	135124	280	135724	480
SW 27				130327	135327	315				
SW 30					135330	360				



### Socket Spanner Insert 1/2" square socket for hexagon bolts

- LEMP insulated inserts are available in four lengths
- The unusually wide range of attachment pieces has greatly extended the application of these tools
- Standard inserts for hex. screws are available on request with a 'nut retainer'
- All inserts are made of alloyed and hardened steel
- Professional multi-coated insulation

Nut Retainer



Description	Order- ref.	Drive	△
Insert with Nut Retainer SW 13	9130413	1/2"	60
Insert with Nut Retainer SW 17	9130417	1/2"	95
Insert with Nut Retainer SW 19	9130419	1/2"	105

### Socket Spanner Insert DIN 7448, standard available in hex. or double hex.

- Standard length 40 mm



### Socket Spanner Insert DIN 7448, extra deep available in hex. and double hex.

- Extra deep 70 mm



### Socket Spanner Insert, long double hex.

- Long type 125 mm shaft



### Socket Spanner Insert, extra long double hex.

- Extra long type 250 mm shaft



Size	Order- ref.	Order ref.	△
SW 8	130408	135408	53
SW 9	130409	135409	53
SW 10	130410	135410	55
SW 11	130411	135411	55
SW 12	130412	135412	57
SW 13	130413	135413	60
SW 14	130414	135414	65
SW 15	130415	135415	70
SW 16	130416	135416	74
SW 17	130417	135417	78
SW 18	130418	135418	82
SW 19	130419	135419	85
SW 20	130420	135420	116
SW 21	130421	135421	127
SW 22	130422	135422	130
SW 23	130423	135423	140
SW 24	130424	135424	148
SW 25	130425	135425	180
SW 26	130426	135426	180
SW 27	130427	135427	210
SW 30	130430	135430	252
SW 32	130432	135432	270
SW 34	130434	135434	300

Order- ref.	Order- ref.	△
130508	135508	102
130509	135509	105
130510	135510	118
130511	135511	120
130512	135512	123
130513	135513	127
130514	135514	134
130515	135515	140
130516		
130517	135517	170
130518	135518	188
130519	135519	204
130520	135520	210
130521		
130522	135522	226
	135523	241
130524	135524	270
130525		
130526	135526	300
130527	135527	337
130530	135530	390
130532	135532	423

Order- ref.	△
135610	230
135613	244
135614	253
135617	302
135619	312
135622	360
135624	403
135627	484
135630	510
135632	560

Order- ref.	△
135813	457
135814	480
135817	530
135819	550
135822	610
135824	680
135827	720
135830	800
135832	840

- The screwdriver sockets are made of alloyed and hardened steel
- Professional multi-coated insulation
- Sockets with 19 mm stepped



### Allen Key Socket for hexagon socket head screw with 3/8"

- Standard type 60 mm

Order- ref.	Drive		Size
140244	3/8"	53	SW 4
140245	3/8"	53	SW 5
140246	3/8"	53	SW 6
140248	3/8"	65	SW 8

### Allen Key Socket for Hex. socket head screw with 3/8" or 1/2" socket

- Normal size 85 mm

### Allen Key Socket for Hex. socket head screw with 3/8" or 1/2" socket

- Long size 125 mm

### Allen Key Socket for Hex. socket head screw with 3/8" or 1/2" socket

- Extra long size 250 mm



#### Allen Key Socket for 3/8" socket

normal      long      extra long

Size	Order- ref.		Order- ref.		Order- ref.	
SW 2	140302	27				
SW 2.5	140325	52				
SW 3	140303	49				
SW 4	140304	50				
SW 5	140305	56	140105	63	140705	89
SW 6	140306	60	140106	73	140706	109
SW 7	140307	66				
SW 8	140308	78	140108	90	140708	156
SW 9	140309	75			140709	219
SW 10	140310	103	140110	151	140710	219
SW 11	140311	114				
SW 12	140312	124				
SW 13	140313	135				
SW 14	140314	118				

#### Allen Key Socket for 1/2" socket

normal      long      extra long

Order- ref.		Order- ref.		Order- ref.	
140504	65				
140505	70	140605	93	140805	122
140506	74	140606	108	140806	143
140507	79				
140508	87	140608	122	140808	143
140510	108	140610	151	140810	185
140512	126				
140514	158				

### Alignment Tool for sector cable with square end of 3/8" or 1/2"

- Insulation of non-brittle plastic
- To align 3 or 4 strand sectoral conductor
- Used with the LEMP ratchet lever No. 131338 or 131312
- Other sizes on request



95-150mm<sup>2</sup>

185-240mm<sup>2</sup>



3/8"

1/2"

Description	Order- ref.	Order- ref.	Cross Section in mm <sup>2</sup>	mm	
Alignment Tool	132095	132096	95 - 150	75	80
Alignment Tool	132185	132186	185 - 240	83	140
Alignment Tool	132030	132031	300	83	140

2



### 3/8" Socket Spanner Insert DIN 7448, normal internal hexagon

- Design 45 mm
- Insulation of non-brittle plastic

### 1/2" Socket Spanner Insert DIN 7448, normal internal hexagon

- Design 55 mm
- Insulation of non-brittle plastic



#### 3/8" 12-kt



Description	Order ref.	INT-Id.	△
Socket Spanner Insert SW 8	2135208	1504208	29
Socket Spanner Insert SW 10	2135210	1504210	29
Socket Spanner Insert SW 11	2135211	1504211	29
Socket Spanner Insert SW 12	135212	1504212	29
Socket Spanner Insert SW 13	2135213	1504213	30
Socket Spanner Insert SW 14	2135214	1504214	30
Socket Spanner Insert SW 16	2135216	1504216	30
Socket Spanner Insert SW 17	2135217	1504217	38
Socket Spanner Insert SW 18	2135218	1504218	30
Socket Spanner Insert SW 19	2135219	1504219	42
Socket Spanner Insert SW 22	2135222	1504222	42

#### 1/2" 12-kt



Description	Order ref.	INT-Id.	△
Socket Spanner Insert SW 10	2135410	1504110	55
Socket Spanner Insert SW 11	2135411	1504111	56
Socket Spanner Insert SW 12	2135412	1504112	57
Socket Spanner Insert SW 13	2135413	1504113	58
Socket Spanner Insert SW 14	2135414	1504114	59
Socket Spanner Insert SW 17	2135417	1504117	63
Socket Spanner Insert SW 19	2135419	1504119	71
Socket Spanner Insert SW 22	2135422	1504122	87
Socket Spanner Insert SW 24	2135424	1504124	98
Socket Spanner Insert SW 27	2135427	1504127	121
Socket Spanner Insert SW 32	2135432	1504132	162

### Allen Key Socket with 3/8" drive for hexagon socket head screw

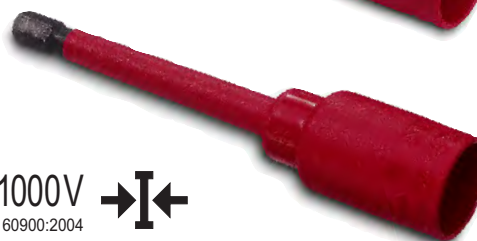
- Normal design 50 mm
- The screwdriver sockets are made of alloyed and hardened steel
- Insulation of non-brittle plastic

### Allen Key Socket with 1/2" drive for hexagon socket head screw

- Normal design 85 mm
- The screwdriver sockets are made of alloyed and hardened steel
- Insulation of non-brittle plastic

### Allen Key Socket with 1/2" drive for hexagon socket head screw

- Long design 135 mm
- The screwdriver sockets are made of alloyed and hardened steel
- Insulation of non-brittle plastic



#### 3/8" normal

Description	Order- ref.	INT-Id.	△
Allen Key Socket SW4	2140244	1505204	28
Allen Key Socket SW5	2140245	1505205	29
Allen Key Socket SW6	2140246	1505206	30
Allen Key Socket SW8	2140248	1505208	33

#### 3/8" long

Description	Order- ref.	INT-Id.	△
Allen Key Socket SW4	2140104	1506204	49
Allen Key Socket SW5	2140105	1506205	54
Allen Key Socket SW6	2140106	1506206	69
Allen Key Socket SW8	2140108	1506208	70

#### 1/2" normal

Description	Order- ref.	INT-Id.	△
Allen Key Socket SW4	2140504	1505104	76
Allen Key Socket SW5	2140505	1505105	78
Allen Key Socket SW6	2140506	1505106	81
Allen Key Socket SW8	2140508	1505108	84
Allen Key Socket SW10	2140510	1505110	90

#### 1/2" long

Description	Order- ref.	INT-Id.	△
Allen Key Socket SW4	2140604	1506104	83
Allen Key Socket SW5	2140605	1506105	88
Allen Key Socket SW6	2140606	1506106	95
Allen Key Socket SW8	2140608	1506108	100
Allen Key Socket SW10	2140610	1506110	107

### Star Socket Tool for 3 Inserts

- Square ends made of alloyed and hardened steel
- Insulation of non-brittle plastic
- For 8 - 22 mm SW standard socket pieces
- Inserts can be locked in place
- Expanding ball interlock system for inserts



1000V  
EN/IEC 60900:2004

Description	Order- ref.	Drive		
Star Socket Tool	121300	3/8"	130	130

### Cross Socket Tool for 4 Inserts

- Square ends made of alloyed and hardened steel, galvanically separated
- Insulation of non-brittle plastic
- For 8 - 22 mm SW standard socket pieces
- Inserts can be locked in place
- Expanding ball interlock system for inserts



1000V  
EN/IEC 60900:2004

Description	Order- ref.	Drive		
Cross Socket Tool	121399	1/2"	150	340
Cross Socket Tool	121400	3/8"	150	180

### Torque Wrench

- Fixed adjusted torque in compliance with EN26789 (±6% tolerance from rated value)
- Lock device actuated by one hand
- Square connection in compliance with ISO1174 DIN3120 in sizes A10 (3/8") and A12.5 (1/2")



**Lo** intercable Locking System

#### Size A10 (3/8")

Description	Order ref.	INT-Id.	
Torque Wrench 8Nm	131408	1508008	410
Torque Wrench 10Nm	131410	1508010	410
Torque Wrench 12Nm	131412	1508012	410
Torque Wrench 15Nm	131415	1508015	410
Torque Wrench 20Nm	131420	1508020	410
Torque Wrench 25Nm	131425	1508025	410

#### Size A12.5 (1/2")

Description	Order ref.	INT-Id.	
Torque Wrench 8Nm	131508	AC3708	410
Torque Wrench 10Nm	131510	AC3710	410
Torque Wrench 12Nm	131512	AC3712	410
Torque Wrench 15Nm	131515	AC3715	410
Torque Wrench 20Nm	131520	AC3720	410
Torque Wrench 25Nm	131525	AC3725	410

### Torque Limiter (with galvanic separation)

- Torque limitation switch in compliance with EN 6789
- Lock device actuated by one hand
- Square connection in compliance with ISO1174 DIN3120 in sizes A10 (3/8") and A12.5 (1/2")
- Insulation according to EN 60900
- Galvanic isolation



**Lo** intercable Locking System

#### Size C10 (3/8")

Description	Order ref.	INT-Id.	
Torque Limiter 7Nm	131457	1509007	360
Torque Limiter 8Nm	131458	1509008	360
Torque Limiter 10Nm	131460	1509010	360
Torque Limiter 12Nm	131462	1509012	360
Torque Limiter 15Nm	131465	1509015	360
Torque Limiter 20Nm	131470	1509020	360
Torque Limiter 25Nm	131475	1509025	360

#### Size C12.5 (1/2")

Description	Order ref.	INT-Id.	
Torque Limiter 7Nm	131557	AC3807	360
Torque Limiter 8Nm	131558	AC3808	360
Torque Limiter 10Nm	131560	AC3810	360
Torque Limiter 12Nm	131562	AC3812	360
Torque Limiter 15Nm	131565	AC3815	360
Torque Limiter 20Nm	131570	AC3820	360
Torque Limiter 25Nm	131575	AC3825	360

## Ratchet Spanner Wrench 3/8" or 1/2" in case

- Mini-plastic case, red
- Equip with insulated tools
- Insulation of non brittle plastic



1/2" Set  
Order-ref. 128350



3/8" Set  
Order-ref. 128360

Description (including tools)	Order-ref.	Length	Width	Height	⚖
Ratchet Spanner Wrench 1/2" in case	128350	385	285	70	3180
Ratchet Spanner Wrench 3/8" in case	128360	385	285	70	1820

Set 128350 consisting of

Description	Orderref
Plastic case, red, without foam padding	128900
Foam Padding for 1/2" Ratchet Lever Set	128919
T-Shaped Lever 1/2"	125702
Ratchet Lever 1/2" VDE	131312
Extension Piece 1/2" square end 125 mm	133412
Extension Piece 1/2" square end 250 mm	133425
Socket Spanner Insert 10 mm 1/2" normal 6kt	130410
Socket Spanner Insert 13 mm 1/2" normal 6kt	130413
Socket Spanner Insert 14 mm 1/2" normal 6kt	130414
Socket Spanner Insert 17 mm 1/2" normal 6kt	130417
Socket Spanner Insert 19 mm 1/2" normal 6kt	130419
Socket Spanner Insert 22 mm 1/2" normal 6kt	130422
Socket Spanner Insert 24 mm 1/2" normal 6kt	130424
Socket Spanner Insert 27 mm 1/2" normal 6kt	130427
Allen key Socket 4.0 x 85 mm 1/2"	140504
Allen key Socket 5.0 x 85 mm 1/2"	140505
Allen key Socket 6.0 x 85 mm 1/2"	140506
Allen key Socket 8.0 x 85 mm 1/2"	140508
Allen key Socket 10.0 x 85 mm 1/2"	140510

Set 128360 consisting of:

Description	Orderref
Plastic case, red, without foam padding	128900
Foam Padding for 3/8" Ratchet Lever Set	128918
Ratchet Lever 3/8" VDE	131338
T-Shaped Lever 3/8"	125802
Extension Piece 3/8" square end 125 mm	132412
Extension Piece 3/8" square end 250 mm	132425
Socket Spanner Insert 8 mm 3/8" normal 6kt	130208
Socket Spanner Insert 10 mm 3/8" normal 6kt	130210
Socket Spanner Insert 13 mm 3/8" normal 6kt	130213
Socket Spanner Insert 14 mm 3/8" normal 6kt	130214
Socket Spanner Insert 17 mm 3/8" normal 6kt	130217
Socket Spanner Insert 19 mm 3/8" normal 6kt	130219
Socket Spanner Insert 22 mm 3/8" normal 6kt	130222
Allen key Socket 4.0 x 85 mm 3/8"	140304
Allen key Socket 5.0 x 85 mm 3/8"	140305
Allen key Socket 6.0 x 85 mm 3/8"	140306
Allen key Socket 8.0 x 85 mm 3/8"	140308

► The tool set illustrated can be altered to your requirements.

See also Page 162:

### Tool Set Clamp Installation in plastic case



Tool Set Clamp Installation I  
Order-ref. 128325



Tool Set Clamp Installation II  
Order-ref. 128340

## Ratchet Spanner Wrench


- Mini-plastic case, red
- Equip with insulated tools
- Insulation of non-brittle plastic



Ratchet Spanner Wrench  $\frac{3}{8}$ "  
Order- ref. 128338



Ratchet Spanner Wrench  $\frac{1}{2}$ "  
Order- ref. 128312

Description (including tools)	Order- ref.	Length	Width	Height	
Ratchet Spanner Wrench $\frac{1}{2}$ " in case	128338	385	285	70	3000
Ratchet Spanner Wrench $\frac{3}{8}$ " in case	128312	385	285	70	3000

$\frac{3}{8}$ " Set consisting of:

Description	Order ref.
Plastic case, red, without foam padding	128900
Foam Padding for $\frac{3}{8}$ " Ratchet Spanner Wrench	128902
T-Shaped lever $\frac{3}{8}$ " square end	125402
Ratchet Lever $\frac{3}{8}$ " VDE	131338
Four arm nut wrench $\frac{3}{8}$ " square end	121400
Extension Piece $\frac{3}{8}$ " new design 125 mm	132412
Extension Piece $\frac{3}{8}$ " new design 250 mm	132425
Socket Spanner Insert 10 mm $\frac{3}{8}$ " extra deep 6kt	130310
Socket Spanner Insert 11 mm $\frac{3}{8}$ " extra deep 6kt	130311
Socket Spanner Insert 12 mm $\frac{3}{8}$ " extra deep 6kt	130312
Socket Spanner Insert 13 mm $\frac{3}{8}$ " extra deep 6kt	130313
Socket Spanner Insert 14 mm $\frac{3}{8}$ " extra deep 6kt	130314
Socket Spanner Insert 17 mm $\frac{3}{8}$ " extra deep 6kt	130317
Socket Spanner Insert 19 mm $\frac{3}{8}$ " extra deep 6kt	130319
Allen Key Socket 5,0 x 85 mm $\frac{3}{8}$ "	140305
Allen Key Socket 6,0 x 85 mm $\frac{3}{8}$ "	140306
Allen Key Socket 8,0 x 85 mm $\frac{3}{8}$ "	140308
Allen Key Socket 6,0 x 125 mm $\frac{3}{8}$ "	140106
Screwdriver 0.6 x 2.8 x 75 mm Square Handle	111328

$\frac{1}{2}$ " Set consisting of:

Description	Order ref.
Plastic case, red, without foam padding	128900
Foam Padding for $\frac{1}{2}$ " Ratchet Spanner Wrench	128901
T-Shaped lever $\frac{1}{2}$ " square end	125302
Ratchet Lever $\frac{1}{2}$ " VDE	131312
Extension Piece $\frac{1}{2}$ " new design 125 mm	133412
Extension Piece $\frac{1}{2}$ " new design 250 mm	133425
Socket Spanner Insert 10 mm $\frac{1}{2}$ " normal 6kt	130410
Socket Spanner Insert 12 mm $\frac{1}{2}$ " normal 6kt	130412
Socket Spanner Insert 13 mm $\frac{1}{2}$ " normal 6kt	130413
Socket Spanner Insert 17 mm $\frac{1}{2}$ " normal 6kt	130417
Socket Spanner Insert 19 mm $\frac{1}{2}$ " normal 6kt	130419
Socket Spanner Insert 22 mm $\frac{1}{2}$ " normal 6kt	130422
Socket Spanner Insert 24 mm $\frac{1}{2}$ " normal 6kt	130424
Socket Spanner Insert 27 mm $\frac{1}{2}$ " normal 6kt	130427
Screwdriver 1.0 x 5.5 x 125 mm Square Handle	111555

## Combi Ratchet Lever Set 10 (3/8")

- Range of application to -40°C



Description	Order- ref.	INT-Id.	— mm —	⚖
Combi Ratchet Lever Set 10	2128360	1598001	275x210x65	approx. 1500

consisting of:

Description	Order ref.	Description	Order ref.
T-Shaped lever 3/8"	125802	Socket Spanner-Insert 17 mm 3/8" normal	2135217
Ratchet Lever 3/8"	2131338	Socket Spanner-Insert 19 mm 3/8" normal	2135219
Extension Piece 125 mm	2132412	Socket Spanner-Insert 22 mm 3/8" normal	2135222
Extension Piece 250 mm	2132425	Allen Key Socket 4.0 x 85 mm 3/8" normal	2140244
Socket Spanner-Insert 8 mm 3/8" normal	2135208	Allen Key Socket 5.0 x 85 mm 3/8" normal	2140245
Socket Spanner-Insert 10 mm 3/8" normal	2135210	Allen Key Socket 6.0 x 85 mm 3/8" normal	2140246
Socket Spanner-Insert 13 mm 3/8" normal	2135213	Allen Key Socket 8.0 x 85 mm 3/8" normal	2140248
Socket Spanner-Insert 14 mm 3/8" normal	2135214	Plastic case with foam padding	128960

## Basic Ratchet Lever Set 10 (3/8")

- Range of application to -40°C



Description	Order- ref.	INT-Id.	— mm —	⚖
Basis Ratchet Lever Set 10	2128355	1598002	225x180x50	ca. 1300

consisting of:

Description	Order ref.	Description	Order ref.
Ratchet Lever 3/8"	2131338	Socket Spanner-Insert 22 mm 3/8" normal	2135222
Socket Spanner-Insert 8 mm 3/8" normal	2135208	Allen Key Socket 4.0 x 135 mm 3/8" long	2140104
Socket Spanner-Insert 10 mm 3/8" normal	2135210	Allen Key Socket 5.0 x 135 mm 3/8" long	2140105
Socket Spanner-Insert 13 mm 3/8" normal	2135213	Allen Key Socket 6.0 x 135 mm 3/8" long	2140106
Socket Spanner-Insert 17 mm 3/8" normal	2135217	Plastic case with foam padding	128965
Socket Spanner-Insert 19 mm 3/8" normal	2135219		

## Basic T Wrench Set 10 (3/8")

- Range of application to -40°C



Description	Order- ref.	INT-Id.	— mm —	⚖
Basic T Wrench Set	2128375	1598004	275x210x65	approx. 1000

consisting of:

Description	Order ref.	Description	Order ref.
T-Shaped lever 3/8"	125802	Allen Key Socket 5.0 x 85 mm 3/8" normal	2140245
Socket Spanner Insert 8 mm 3/8" normal	2135208	Allen Key Socket 6.0 x 85 mm 3/8" normal	2140246
Socket Spanner Insert 10 mm 3/8" normal	2135210	Allen Key Socket 8.0 x 85 mm 3/8" normal	2140248
Socket Spanner Insert 13 mm 3/8" normal	2135213	Allen Key Socket 5.0 x 135 mm 3/8" long	2140105
Socket Spanner Insert 17 mm 3/8" normal	2135217	Allen Key Socket 6.0 x 135 mm 3/8" long	2140106
Socket Spanner Insert 19 mm 3/8" normal	2135219	Plastic case with foam padding	128960
Socket Spanner Insert 22 mm 3/8" normal	2135222		

## Torque Wrench Set 10 (3/8")

- Range of application to -40°C



Description	Order ref.	INT-Id.	— mm —	⚖
Torque Wrench-Set 10	2128395	1598009	322x253x65	approx. 1000

consisting of:

Description	Order ref.	Description	Order ref.
Torque Wrench 8Nm	131408	Allen Key Socket 4.0 x 135 mm 3/8" long	2140104
Torque Wrench 10Nm	131410	Allen Key Socket 5.0 x 135 mm 3/8" long	2140105
Torque Wrench 15Nm	131415	Allen Key Socket 6.0 x 135 mm 3/8" long	2140106
		Plastic case with foam padding	128970

## Torque Wrench Basic Set 10 (3/8")



Description	Order- ref	INT-Id.	— mm —	⚖
Torque Wrench Basic Set 10	2128400	1598010	275x140x40	approx. 800

consisting of:

Description	Order ref.	Description	Order ref.
Torque Wrench 20Nm	131420	Allen Key Socket 8.0 x 85 mm 3/8" normal	2140248
Socket Spanner Insert 13 mm 3/8" normal	2130213	Plastic case with foam padding	128975

## Combi Set 12.5 (1/2")

● Range of application to -40°C



Description	Order- ref	INT-Id.	— mm —	⚖
Combi Set 12,5	2128350	1599002	330x270x75	approx. 3100


consisting of:

Description	Order ref.	Description	Order ref.
T-Shaped Lever 1/2"	125702	Socket Spanner Insert 22 mm 1/2" normal	2135422
Ratchet Lever 1/2"	2131312	Socket Spanner Insert 24 mm 1/2" normal	2135424
Extension Piece 1/2" 125 mm	2133412	Socket Spanner Insert 27 mm 1/2" normal	2135427
Extension Piece 1/2" 250 mm	2133425	Allen Key Socket 4.0 x 85 mm 1/2" normal	2140504
Socket Spanner Insert 10 mm 1/2" normal	2135410	Allen Key Socket 5.0 x 85 mm 1/2" normal	2140505
Socket Spanner Insert 13 mm 1/2" normal	2135413	Allen Key Socket 6.0 x 85 mm 1/2" normal	2140506
Socket Spanner Insert 14 mm 1/2" normal	2135414	Allen Key Socket 8.0 x 85 mm 1/2" normal	2140508
Socket Spanner Insert 17 mm 1/2" normal	2135417	Allen Key Socket 10.0 x 85 mm 1/2" normal	2140510
Socket Spanner Insert 19 mm 1/2" normal	2135419	Plastic case with foam padding	128980

## Basic Ratchet Set 12.5 (1/2")

- Range of application to -40°C



Description	Order- ref	INT-Id.	— mm —	
Basic Ratchet Set 12.5	2128370	1599005	275x210x65	approx. 1000


consisting of:

Description	Order ref.	Description	Order ref.
Ratchet Lever 1/2"	2131312	Socket Spanner Insert 24 mm 1/2" normal	2135424
Socket Spanner Insert 10 mm 1/2" normal	2135410	Allen Key Socket 4.0 x 85 mm 1/2" normal	2140504
Socket Spanner Insert 13 mm 1/2" normal	2135413	Allen Key Socket 5.0 x 85 mm 1/2" normal	2140505
Socket Spanner Insert 17 mm 1/2" normal	2135417	Allen Key Socket 6.0 x 85 mm 1/2" normal	2140506
Socket Spanner Insert 19 mm 1/2" normal	2135419	Plastic case with foam padding	128985
Socket Spanner Insert 22 mm 1/2" normal	2135422		

## Basic T Wrench Set 12.5 (1/2")

- Range of application to -40°C



Description	Order- ref	INT-Id.	— mm —	
Basic T Wrench Set 12.5	2128365	1599001	275x210x65	approx. 1500

consisting of:

Description	Order ref.	Description	Order ref.
T-Shaped lever 1/2"	125702	Allen Key Socket 5.0 x 85 mm 1/2" normal	2140505
Socket Spanner Insert 10 mm 1/2" normal	2135410	Allen Key Socket 6.0 x 85 mm 1/2" normal	2140506
Socket Spanner Insert 13 mm 1/2" normal	2135413	Allen Key Socket 8.0 x 85 mm 1/2" normal	2140508
Socket Spanner Insert 17 mm 1/2" normal	2135417	Allen Key Socket 5.0 x 135 mm 1/2" long	2140605
Socket Spanner Insert 19 mm 1/2" normal	2135419	Allen Key Socket 6.0 x 135 mm 1/2" long	2140606
Socket Spanner Insert 22 mm 1/2" normal	2135422	Plastic case with foam padding	128990

## Torque Wrench Set 12.5 (1/2")

- Range of application to -40°C



Description	Order- ref.	INT-Id.	— mm —	⚖
Torque Wrench Set 12.5	2128385	AV3755	275x210x65	approx. 1000

consisting of:

Description	Order ref.	Description	Order ref.
Torque Wrench 8Nm	131508	Allen Key Socket 4.0 x 135 mm 1/2" long	2140604
Torque Wrench 10Nm	131510	Allen Key Socket 5.0 x 135 mm 1/2" long	2140605
Torque Wrench 15Nm	131515	Allen Key Socket 6.0 x 135 mm 1/2" long	2140606
		Plastic case with foam padding	128970

## Torque Wrench Basic Set 12.5 (1/2")



Description	Order- ref.	INT-Id.	— mm —	⚖
Torque Wrench Basic-Set 12.5	2128390	AV3760	192x140x40	approx. 800

consisting of:

Description	Order ref.	Description	Order ref.
Torque Wrench 20Nm	131520	Allen Key Socket 8.0 x 85 mm 1/2" normal	2140508
Socket Spanner Insert 13 mm 1/2" normal	2135413	Plastic case with foam padding	128975

### Single Open End Spanner DIN 7446 (offset 15°)





- Made of Chrome-Vanadium steel
- Professional multi-coated insulation
- Suitable for live work up to 1000V
- Torque testing according to DIN 899 , line C



### Single End Ring Spanner DIN 7447 (cranked)

- Made of Chrome-Vanadium steel
- Professional multi-coated insulation
- Suitable for live work up to 1000V



Size	Description	Order-ref.			Description	Order-ref.		
6	Open-End Spanner	151306	80	20	Ring Spanner	161306	140	41
7	Open-End Spanner	151307	80	20	Ring Spanner	161307	145	50
8	Open-End Spanner	151308	95	20	Ring Spanner	161308	150	62
9	Open-End Spanner	151309	105	24	Ring Spanner	161309	155	68
10	Open-End Spanner	151310	110	29	Ring Spanner	161310	165	84
11	Open-End Spanner	151311	115	33	Ring Spanner	161311	175	90
12	Open-End Spanner	151312	130	44	Ring Spanner	161312	185	106
13	Open-End Spanner	151313	135	48	Ring Spanner	161313	185	113
14	Open-End Spanner	151314	140	54	Ring Spanner	161314	195	135
15	Open-End Spanner	151315	145	58	Ring Spanner	161315	200	160
16	Open-End Spanner	151316	145	70	Ring Spanner	161316	205	175
17	Open-End Spanner	151317	155	84	Ring Spanner	161317	205	205
18	Open-End Spanner	151318	170	100	Ring Spanner	161318	215	227
19	Open-End Spanner	151319	175	105	Ring Spanner	161319	220	296
20	Open-End Spanner	151320	200	149	Ring Spanner	161320	240	300
21	Open-End Spanner	151321	200	159	Ring Spanner	161321	245	305
22	Open-End Spanner	151322	220	192	Ring Spanner	161322	245	308
24	Open-End Spanner	151324	240	242	Ring Spanner	161324	270	422
27	Open-End Spanner	151327	260	322	Ring Spanner	161327	285	455
30	Open-End Spanner	151330	275	343	Ring Spanner	161330	300	561
32	Open-End Spanner	151332	305	500	Ring Spanner	161332	320	646
34	Open-End Spanner	151334	310	500	Ring Spanner	161334	340	1060
36	Open-End Spanner	151336	310	575	Ring Spanner	161336	340	1060

## Adjustable Wrench (offset 15°)

- Read off scale for jaw opening
- Made of alloyed and hardened steel
- Professional multi-coated insulation
- Not recommended for live work



1000V  
EN/IEC 60900:2004

Description	Order- ref.	Jaw opening in mm	Inch	↔	⚖
Adjustable Wrench	151904	0 - 13	4"	110	140
Adjustable Wrench	151906	0 - 20	6"	160	190
Adjustable Wrench	151908	0 - 27	8"	210	260
Adjustable Wrench	151910	0 - 30	10"	260	400
Adjustable Wrench	151912	0 - 34	12"	310	870
Adjustable Wrench	151915	0 - 44	15"	360	1230
Adjustable Wrench	151918	0 - 53	18"	450	1900

## Nut Holder

- 31 CrV 3 Steel
- Professional multi-coated insulation



1000V  
EN/IEC 60900:2004

Description	Order- ref.	↔	↕	⚖
Nut Holder SW 10	161410	190	70	100
Nut Holder SW 12	161412	195	70	100
Nut Holder SW 13	161413	215	70	180
Nut Holder SW 14	161414	245	80	220
Nut Holder SW 17	161417	245	90	240
Nut Holder SW 18	161418	245	90	240

Description	Order- ref.	↔	↕	⚖
Nut Holder SW 19	161419	245	95	240
Nut Holder SW 20	161420	250	100	280
Nut Holder SW 22	161422	250	100	280
Nut Holder SW 24	161424	250	100	280
Nut Holder SW 30	161430	260	110	470

## Clamp Device for Screw Connectors

To clamp Screw Connectors with diameters from 14 to 40mm.

### Technical Characterisitcs:

- Suitable for live work up to 1000 V
- Vice clamp system
- Usable with insulated and non-insulated connectors 14 to 40mm
- Reducing insert supplied to ensure a safe fit on small Ø connectors
- Insulated in compliance with EN/IEC60900 Standards



1000V  
EN/IEC 60900:2004

Description	Order- ref.	INT-Id.	mm	⚖
Clamp Device for Screw Connectors	161914	22013	195x65x64	approx. 350

### Clamp device for Screw Connectors

- For a better handling of Screw Connectors on the installation of connecting boxes
- Adjustable in steps for Screw Connectors 25 mm<sup>2</sup> - 240 mm<sup>2</sup> maximum holding capacity Ø 32 mm



161906



Description	Order- ref	— mm —	for Screw Connectors Ø	⚖
Clamp device for Screw Connectors all sizes	161910	310	25 - 50 mm	540
Clamp device for Screw Connectors all sizes	161900	280	14 - 32 mm	400
Clamp device for Screw Connectors to Ø 15 mm	161906	240	0 - 15 mm	350

### Reversible Ring Ratchet Lever

- 31 CrV 3 Steel
- Double ended ratchet lever
- Professional multi-coated insulation



Description	Order- ref.	Jaw opening	↔	↕	⚖
Ring Ratchet Lever	161717	13 x 17	220	15	280
Ring Ratchet Lever	161718	16 x 18	240	15	400
Ring Ratchet Lever	161719	17 x 19	240	15	400
Ring Ratchet Lever	161724	19 x 24	240	15	500

### ● LEMP

... we manufacture traditionally with modern technology



## Screwdriver DIN 7437 with tapered blade

- Screwdriver with tapered blade
- Blade as DIN 5264
- Blade insulation directly applied to blade
- Blade of chrome vanadium molybdenum steel, hardened; burnished
- Handle: cellulose acetate; non-brittle; red; cadmium-free, splinter-free, oil and acid resistant



1000V  
EN/IEC 60900:2004

## Serial 1115.., with Square Handle

## Serial 1119.., with Softgrip

- Screwdriver with multi-component technology

## Serial 1111.., with Powerformgrip

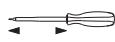
- Screwdriver with multi-component technology

## Serial 21112.., (AC150..), FUTUR

- Blade isolation and handle made of non-brittle plastic
- Blade of chrome vanadium molybdenum steel, hardened; burnished
- Ergonomic handles for requiring max. effort for operations

## Serial 21113.., (AC1301..), FUTUR II

- Screwdriver with multi-component technique
- Blade of high resistance vanadium molybdenum steel, hardened with surface burnish protection



			SquareHandle	Softgrip	Powerformgrip	Futur	Futur II
mm	mm	mm	Order- ref.	Order- ref.	Order- ref.	Order- ref.	Order- ref.
1.6	0.4	40	111516 22				
2.3	0.5	60	111523 24				
2.5	0.4	75 (*80)	111525 26	111925 27	111125* 27		
2.8	0.6	75	111528 32				
3.0	0.5	100	111531 40	111931 30	111131 31	2111232 30	2111331 29
3.0	0.6	75					
3.0	0.6	150	111530 36				
3.5	0.6	100	111535 40	111935 33	111135 31		
4.0	0.8	100	111540 58	111940 52	111140 54	2111240 40	2111340 36
4.0	0.8	125					
4.5	0.6	175	111599 74				
4.5	1.0	125	111545 69	111945 56		2111245 40	
4.5	1.0	175	111598 73	111998 62			
5.5	1.0	125	111555 95	111955 88	111155 71		2111355 64
5.5	1.0	150				2111254 70	
5.5	1.0	175	111590 155	111990 96			
6.0	1.2	150	111560 108	111960 93			
6.5	1.2	150	111565 117	111965 99	111165 94	2111265 90	2111365 75
8.0	1.2	175	111580 156	111980 161	111180 139	2111280 120	2111380 120
8.0	1.6	200			111181 139		
10.0	1.6	200	111510 220	111910 192	111110 171	2111210 170	2111310 187

\* Special length

**Screwdriver DIN 7438**  
for Cross recessed head screw

- Screwdriver with tapered blade
- Blade insulation directly applied to blade
- Blade of chrome vanadium molybdenum steel, hardened; burnished
- Handle: cellulose acetate; non-brittle; red; cadmium-free, splinter-free, very oil and acid resistant



**Serial 1135..., with Square Handle (PH)**  
**Serial 1145..., with Square Handle (PZ)**

**Serial 1139..., with Soft Grip (PH)**  
**Serial 1149..., with Soft Grip (PZ)**

- Screwdriver with multi-component technology

**Serial 1131..., with Power Form Grip (PH)**  
**Serial 1141..., with Power Form Grip (PZ)**

- Screwdriver with multi-component technology

**Serial 21132..., (AC160..), FUTUR (PH)**

- Blade isolation and handle made of non-brittle plastic
- Blade of Chrome Vanadium Molybdenum steel, hardened; burnished
- Ergonomic handles for an optimal transfer of force

**Serial 21133..., (1302..), FUTUR II (PH)**  
**Serial 21143..., (1303..), FUTUR II (PZ)**

- Screwdriver with multi-component technique
- Blade of high resistance vanadium molybdenum steel, hardened with surface burnish protection

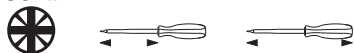


**Typ „Phillips“ PH**



			Square grip		Soft grip		Powerformgrip		Futur		Futur II	
	mm	mm	Order- ref.	△	Order- ref.	△	Order- ref.	△	Order- ref.	△	Order- ref.	△
0	60	135	113500	27	113900	27	113100	20	2113200	30	2113300	27
1	80	170	113501	61	113901	53	113101	40	2113201	50	2113301	36
1	250	350										
2	100	200	113502	97	113902	92	113102	60	2113202	70	2113302	71
2	250	350										
3	150	250	113503	168	113903	171	113103	140	2113203	140	2113303	140
4	200	317	113504	270	113904	257	113104	172	2113204	230	2113304	245

**Typ „Pozidriv“ PZ**



			Square grip		Soft grip		Powerformgrip		Futur II	
	mm	mm	Order- ref.	△	Order- ref.	△	Order- ref.	△	Order- ref.	△
0	60	135	114500	31	114900	28	114110	30	2114300	27
1	80	170	114501	63	114901	53	114111	59	2114301	37
1	250	350								
2	100	200	114502	101	114902	93	114112	92	2114302	71
2	150	250								
2	250	350								
3	150	260	114503	183	114903	171	114113	151	2114303	141
4	200	300	114504	309			114114	173		

## Screwdriver

for hexagon socket screws

- The front side of the blade has rounded edge, to facilitate the insert of the blade
- Blade insulation directly applied to blade
- Blade of Chrome Vanadium Molybdenum steel, hardened; burnished
- Handle: cellulose acetate; non-brittle; red; cadmium-free, splinter-free, oil and acid resistant



### Serial 1155..., with Square grip



### Serial 1151..., with Power form grip

- Screwdriver with multi-component technology



### Serial 21153..., (1304...), FUTUR II

- Screwdriver with multi-component technology
- Blade in high resistance vanadium molybdenum steel, hardened with surface burnish protection



#### Square grip

#### Powerform grip

#### Futur II

mm	mm	mm
1.5	60	135
2.0	60	135
2.5	75 (*80)	150
3.0	75 (*80)	155
4.0	75 (*80)	155
5.0	75 (*80)	165
6.0	100	200
8.0	100	210

Order-ref.	⚖
115515	27
115502	28
115525	32
115503	44
115504	48
115505	72
115506	110
115508	170

Order-ref.	⚖
115125*	47
115103*	50
115104*	56
115105*	79
115106	95
115108	160

Order-ref.	⚖
2115302	24
2115325	26
2115303	44
2115304	51
2115305	79
2115306	95
2115308	151

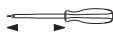
\* Special length

## Ball-ended hex. Screwdriver

for hexagon socket screws

### Serial 21103..., (1305...), FUTUR II

- Screwdriver with multi-component technology
- Blade in high resistance vanadium molybdenum steel, hardened with surface burnish protection



#### Futur II

mm	mm	mm
2.0	100	200
2.5	100	200
3.0	100	205
4.0	100	205
5.0	100	215
6.0	125	230
8.0	150	270

Order-ref.	⚖
2110320	31
2110325	31
2110330	46
2110340	55
2110350	85
2110360	104
2110380	176



**Nut Spinner**  
for hexagon socket screws

- Long internal shaft to accept the screw
- Blade insulation directly applied to blade
- Blade of Chrome Vanadium Molybdenum steel, hardened; burnished
- Handle: cellulose acetate; non-brittle; red; cadmium-free, splinter-free, oil and acid resistant



**Serial 1365.., with Square grip**



**Serial 1369.., with Soft grip**

- Screwdriver with multi-component technology



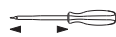
**Serial 1361.., with Power form grip**

- Screwdriver with multi-component technology



**Serial 21363.., (1306..), FUTUR II**

- Screwdriver with multi-component technology
- Blade in high resistance vanadium molybdenum steel, hardened with surface burnish protection



**Square grip**

**Soft grip**

**Power form grip**

**Futur II**

mm	mm	mm
3.0	125	215
4.0	125	215
4.5	125	215
5.0	125	215
5.5	125	215
6.0	125	215
7.0	125	225
8.0	125	225
9.0	125	225
10.0	125	225
11.0	125	235
12.0	125	235
13.0	125	235
14.0	125	235
15.0	125	242
16.0	125	242
17.0	125	242

Order- ref.	⚖
136503	74
136504	77
136505	79
136555	70
136506	70
136507	115
136508	118
136509	119
136510	122
136511	176
136512	178
136513	190
136514	192
136515	220
136516	220
136517	230

Order- ref.	⚖
136904	77
136905	77
136955	78
136906	101
136907	122
136908	124
136909	128
136910	138
136911	182
136912	191
136913	194
136914	199
136915	210
136916	210
136917	217

Order- ref.	⚖
136155	86
136106	88
136107	121
136108	123
136109	125
136110	143
136112	163
136113	167

Order- ref.	⚖
2136304	52
2136305	54
2136355	53
2136306	71
2136307	89
2136308	92
2136309	95
2136310	121
2136311	154
2136312	157
2136313	165

## Screwdriver

for internal TORX-Screws

- Blade insulation directly applied to blade
- Blade of Chrome Vanadium-Molybdenum steel, hardened; burnished
- Handle: cellulose acetate; non-brittle; red; cadmium-free, splinter-free, very oil and acid resistant



### Serial 1109.., with Soft grip

- Screwdriver with multi-component technology

### Serial 1101.., with Power form grip

- Screwdriver with multi-component technology

### Serial 21105.., (1307..), FUTUR II

- Screwdriver with multi-component technology
- Blade in high resistance vanadium molybdenum steel, hardened with surface burnish protection



#### Soft grip

Order- ref.	⚖
110905	27
110906	27
110907	27
110908	27
110909	27
110910	27
110915	54
110920	54
110925	76
110927	94
110930	94
110940	146
110945	146

#### Power form grip

Order- ref.	⚖
110110*	30
110115	59
110120	59
110125*	92
110130	93
110140*	151

#### Futur II

Order- ref.	⚖
2110510	27
2110515	52
2110520	52
2110525	52
2110530	91

TORX	mm	mm
T05	60	135
T06	60	135
T07	60	135
T08	60	135
T09	60	135
T10	60 (*80)	135
T15	80	170
T20	80	170
T25	80 (*100)	170
T27	100	200
T30	100	200
T40	150 (*130)	260
T45	150	260

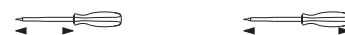
\* Special length

## Magnetic Bit Holding Screwdriver

- Bit holder 1/4"; magnetic
- The transparent dial prevents the bits from falling out
- Standard supply of 6 Bits (length 25 mm) see Illustration
- Powergrip: high-quality plastic, non brittle, red, cadmium free
- Bit size for 119300 Slotted screw: 4,5 x 0,6 / 6,5 x 1,2 / 8,0 x 1,6  
Cross-Slot screw: PH 1 / PH 2 / PH 3
- Bit size for 119315 Torx: T10 / T15 / T20 / T25 / T30



Order- ref. 119300



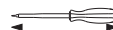
Description	Order. ref.	mm	mm	⚖
Magnetic Bit Holding Screwdriver (6 Bits)	119300	120	230	200
Magnetic Bit Holding Screwdriver (5 Torx-Bits)	119315	120	230	190

### Screw Retaining Screwdriver

- Especially suitable for placing and tightening of screws in restricted space
- Clamp sleeve made of Polyamide holds the screw
- Blade of Chrome Vanadium Molybdenum steel, hardened; burnished
- Handle: cellulose acetate; non-brittle; red; cadmium-free

### Screw Retaining Screwdriver with Square grip

### Screw Retaining Screwdriver with Power form grip



Square grip

Power form grip

mm	mm	mm	Best. Nr.	⚖	Best. Nr.	⚖
2.5 x 75	75	160	111626	31	111625	25
3.0 x 100	100	195	111631	56	111630	40
4.0 x 125	125	230	111641	85	111640	63
5.0 x 150	150	265	111651	122	111650	110
6.0 x 175	175	290	111661	145	111660	135
	0	190	111610	55	111600	66
	1	150	111611	85	111601	110
	2	175	111612	147	111602	135
		190	111680	55	111670	66
		255	111681	85	111671	110
		280	111682	147	111672	135

### Special Screwdriver with Combination profile

- For combined Slotted-/Intersecting slot Screws in electrical systems, for example clamping strips, switches and automation
- Blade insulation directly applied to blade
- Blade of Chrome Vanadium-Molyb. steel, hardened; burnished
- Handle: cellulose acetate; non-brittle; red; cadmium-free, splinter-free, oil and acid resistant



Typ:Phillips



Typ:Pozidriv



Description	Order- ref.	INT-Id.	mm	mm	⚖
Combination-Screwdriver PH 1	111755	13131	80	180	38
Combination-Screwdriver PH 2	111756	13132	100	205	71
Combination-Screwdriver PZ 1	111757	13141	80	180	38
Combination-Screwdriver PZ 2	111758	13142	100	205	71

### Screwdriver for Serial Terminal Connectors

- Special screwdriver with multiple-step blade
- for all Terminals with 2.3 mm Ø (Order-ref. 111751)  
4.0 mm Ø (Order- ref. 111750) Testsocketscrews and Testplugconnector
- Blade insulation directly applied to blade
- Blade of Chrome Vanadium-Molyb. steel, hardened; burnished
- Handle: cellulose acetate; non-brittle; red; cadmium-free, splinter-free, oil and acid resistant



Description	Order- ref.	mm	mm	mm	⚖
Screwdriver for Serial-Terminal-Connectors	111751	0.6 x 3.5	100	200	55
Screwdriver for Serial-Terminal-Connectors	111750	0.9 x 6.5	175	250	85

## Torque Screwdriver

Designed for accurate tightening of bolt connections with preset torque (slotted drive, Phillips and Pozidrive).

### Technical Characteristics:

- Torque continually variable from 0.4 Nm to 5.0 with attached T-Handle
  - Torque-Handle 2131651 from 0.4 till 1.0Nm
  - Torque-Handle 2131655 from 1 till 5.0Nm
- View window with Torque-scale
- release accuracy tolerance  $\pm 6\%$  of the selected value
- Handle diameter adjusted to the particular torque range
- Colour-coded exchangeable with blades
- Insulation according EN/IEC60900
- Fix adjustable torque on request
- Range of application to  $-40^{\circ}\text{C}$



Description	Order- ref	— mm —	⚖
Torque-Screwdriver-Set 0.4-1.0Nm	2131690	225x180x45	approx. 450

consisting of:

Description	Order ref.
Torque-Handle 0.4 - 1.0Nm	2131651
Blade Slot 0.5x3	2131662
Blade Slot 0.8x4	2131664
Blade Cross recessed PH0	2131670

Description	Order ref.
Blade Cross recessed PH1	2131671
Blade Cross recessed PZ0	2131680
Blade Cross recessed PZ1	2131681
T-Handle	2131686

Description	Order- ref	— mm —	⚖
Torque-Screwdriver-Set 1.0-5.0Nm	2131691	225x180x45	approx. 510

consisting of:

Description	Order ref.
Torque-Handle 1.0 - 5.0Nm	2131655
Blade Slot 0.8x4	2131664
Blade Slot 1.0x5.5	2131665
Blade Cross recessed PH1	2131671

Description	Order ref.
Blade Cross recessed PH2	2131672
Blade Cross recessed PZ1	2131681
Blade Cross recessed PZ2	2131682
T-Handle	2131686

Description	Order- ref.	— mm —	⚖
Torque-Screwdriver-Set 0.4-5.0Nm	2131692	225x180x45	approx. 630

consisting of:

Description	Best. Nr.
Torque-Handle 0.4 - 1.0Nm	2131651
Torque-Handle 1.0 - 5.0Nm	2131655
Blade Slot 0.5x3	2131662
Blade Slot 0.8x4	2131664
Blade Slot 1.0x5.5	2131665
Blade Cross recessed PH0	2131670

Description	Best. Nr.
Blade Cross recessed PH1	2131671
Blade Cross recessed PH2	2131672
Blade Cross recessed PZ0	2131680
Blade Cross recessed PZ1	2131681
Blade Cross recessed PZ2	2131682
T-Handle	2131686

## Angled Allen Key

### for hex. socket screws

- For hex. socket screws
- Metal parts of CV steel with rust-proof surface, nickel-plated
- Insulation of Polyamide with fibre glass layer
- The model with extended handle is available only in SW 5 and SW 6

heavy design



Description	Hexagon	Order ref.			
Angle Allen Key	SW 2.5	116325	104	35	30
Angle Allen Key	SW 3	116303	104	35	31
Angle Allen Key	SW 4	116304	104	35	34
Angle Allen Key	SW 5	116305	106	35	36
Angle Allen Key	SW 6	116306	110	40	46
Angle Allen Key	SW 8	116308	120	45	80
Angle Allen Key	SW 10	116310	120	50	125
Angle Allen Key	SW 12	116312	260	55	340
Angle Allen Key heavy design	SW 5	116505	150	35	75
Angle Allen Key heavy design	SW 6	116506	150	40	88

## T-handle Allen Key 95 mm x 115 mm

### for hex. socket screws

- Light-weight especially for cable clamp ring
- Metal parts of CV steel with rust-proof surface, nickel-plated
- Insulation of Polyamide with fibre glass layer



Description	Hexagon	Order- ref.			Nm	
T-handle Allen Key	SW 2.5	117325	115	95	4	80
T-handle Allen Key	SW 3	117303	115	95	4	80
T-handle Allen Key	SW 4	117304	115	95	7	80
T-handle Allen Key	SW 5	117305	115	95	30	80
T-handle Allen Key	SW 6	117306	115	95	30	90

## T-handle Allen Key 95 mm x 160 mm

### for hex. socket screws

- Heavy design, from SW 10 with metal reinforcement in the T-handle
- Metal parts of CV steel with rust-proof surface, nickel-plated
- Insulation of Polyamide with fibre glass layer



Description	Hexagon	Order- ref.			Nm	
T-handle Allen Key	SW 4	117504	160	95	7	105
T-handle Allen Key	SW 5	117505	160	95	30	105
T-handle Allen Key	SW 6	117506	160	95	35	110
T-handle Allen Key	SW 8	117508	160	95	60	115
T-handle Allen Key	SW 10	117510	160	95	90	120
T-handle Allen Key	SW 13	117513	160	95	100	145

### T-handle Allen Key 70 mm x 120 mm for hex. socket screws

- Special design with small T-handle (70mm wide) to prevent too higher torque being applied
- Metal parts of CV steel with rust-proof surface, nickel-plated
- Insulation of Polyamide with fibre glass layer



 1000V  
EN/IEC 60900:2004

Description		Order- ref.			Nm	
T-handle Allen Key	SW 5	117973	140	70	35	80

### T-handle Allen Key 90 mm x 200 mm for hex. socket screws

- Long design
- Metal parts of CV steel with rust-proof surface, nickel-plated
- Insulation of Polyamide with fibre glass layer



 1000V  
EN/IEC 60900:2004





Description		Order- ref.			Nm	
T-handle Allen Key	SW 5	117972	200	90	30	105
T-handle Allen Key	SW 6	117970	200	90	35	105

### T-handle Allen Key 90 mm x 240 mm for hex. socket screws

- Extra long design
- Metal parts of CV steel with rust-proof surface, nickel plated
- Insulation of Polyamide with glass-fibre layer





 1000V  
EN/IEC 60900:2004

Description		Order- ref.			Nm	
T-handle Allen Key	SW 5	117335	240	90	30	100
T-handle Allen Key	SW 6	117336	240	90	30	115
T-handle Allen Key	SW 8	117338	240	90	30	130
T-handle Allen Key	SW 10	117331	240	90	30	115

### Four-arm nut wrench

- Made of seamless cold-drawn precision steel tube
- Material 25 CrMo4 hardened to 110-150 kg/mm<sup>2</sup>, brazed
- Nickel plated



Description	Order- ref.	Wrench Size		
Four-arm nut wrench tube	122007	11 x 13 x 14 x 17	125	180
Four-arm nut wrench tube	122008	10 x 11 x 13 x 17	125	180
Four-arm nut wrench tube	122009	10 x 11 x 14 x 17	125	180
Four-arm nut wrench tube	122010	10 x 13 x 14 x 17	125	180
Four-arm nut wrench tube	122012	10 x 12 x 14 x 17	125	180
Four-arm nut wrench tube	122013	10 x 13 x 17 x 19	125	180
Four-arm nut wrench tube	122014	10 x 14 x 16 x 18	125	180

**T-handle socket DIN 7440**  
for external socket

**160 mm T-handle**

- Made of seamless cold-drawn precision steel tube
- Material 25 CrMo4 hardened to 110-150 kg/mm<sup>2</sup>, brazed
- Professional multi-coated insulation



**200 mm Shank length**

Description	Order- ref.	⊙	⚖
T-handle socket DIN 7440	137410	SW 10	310
T-handle socket DIN 7440	137411	SW 11	330
T-handle socket DIN 7440	137412	SW 12	350
T-handle socket DIN 7440	137413	SW 13	360
T-handle socket DIN 7440	137414	SW 14	440
T-handle socket DIN 7440	137416	SW 16	450
T-handle socket DIN 7440	137417	SW 17	450
T-handle socket DIN 7440	137418	SW 18	470
T-handle socket DIN 7440	137419	SW 19	510
T-handle socket DIN 7440	137420	SW 20	510
T-handle socket DIN 7440	137422	SW 22	520
T-handle socket DIN 7440	137424	SW 24	540

**300 mm Shank length**

Description	Order- ref.	⊙	⚖
T-handle socket DIN 7440	138410	SW 10	370
T-handle socket DIN 7440	138411	SW 11	380
T-handle socket DIN 7440	138412	SW 12	400
T-handle socket DIN 7440	138413	SW 13	420
T-handle socket DIN 7440	138414	SW 14	470
T-handle socket DIN 7440	138416	SW 16	520
T-handle socket DIN 7440	138417	SW 17	520
T-handle socket DIN 7440	138418	SW 18	560
T-handle socket DIN 7440	138419	SW 19	560
T-handle socket DIN 7440	138420	SW 20	600
T-handle socket DIN 7440	138422	SW 22	600
T-handle socket DIN 7440	138424	SW 24	660

**Four arm nut wrench, insulated**

- The steel- hex. inserts are independently insulated
- Cross made of non-brittle plastic



Description	Order- ref.	Wrench Size	⚖
Four-arm nut wrench	121401	10 x 11 x 14 x 17	220
Four-arm nut wrench	121402	10 x 12 x 14 x 17	220
Four-arm nut wrench	121403	11 x 12 x 13 x 17	220
Four-arm nut wrench	121404	10 x 13 x 14 x 17	230
Four-arm nut wrench	121405	11 x 13 x 14 x 17	230
Four-arm nut wrench	121406	13 x 17 x 19 x 22	340
Four-arm nut wrench	121407	14 x 17 x 19 x 22	360
Four-arm nut wrench	121408	10 x 11 x 12 x 13	200
Four-arm nut wrench	121409	10 x 11 x 13 x 17	220



### **Why no contrasting colour with multicoated insulation?**

Tool insulation with contrasting colours of a multi-coated insulation is occasionally emphasized and described as a special safety feature.

It is claimed that when wear and tear of the top coating occurs, contrasting colours are appearing, signalling a warning. It gives the same effect if damaged, making it easier for the electrician to check.

This claim is contradicted by experts. An approval symbol is not necessarily proof of the undercoating quality and therefore a damaged tool should not, under any circumstances, be tolerated by the electrician until a different colour is visible. Even if the undercoating had been checked, by applying a further coating the relevant approval mark ceases to exist.

Insulation, in any case, has to be regarded as one unit only, since it has been subjected as such to comprehensive checks as per EN 60900. Different colourings should not be permitted to indicate a safety feature.

Since certain types of tools cannot be sold in multicolour, the distinction between different kinds of insulations presents an additional risk to skilled personnel.

The danger of misinformation regarding multi-colour insulation is therefore great. Due to such product advertising there is a risk that the electrician may declare his tools as unsafe only after identifying a contrasting colour. This is highly dangerous especially only when tools like a cable knife or screwdriver with only one insulating coating are being used by mistake.

When multi-coated insulation has been applied to tools, there is usually a manufacturing related reason behind it, depending on type of tool and its technical advances. The different coating colourings can, at best, be regarded as a “trendy attribute” and commended as such.

### **Why Open-ended Spanners with measurements according to DIN 894 (and not DIN 3114 or DIN 3110) ?**

These Open-ended Spanners are at the open ends and with smaller widths of considerably lower measurements. The weight of all sizes is lower.

The considerably slimmer tool is ideal to use when working on installations in restricted space. This design, in contrast to the saw-off Double Open-ended Spanner, meets with ergonomic demand.

And **why** is the use of this type especially costly ? Material and treatment of the basic tools must meet DIN 5768, Part 2/VDE 0680, Part 2 requirements. Hardness according to line 1, and torque test according to line C of the Technical Delivery Conditions of the DIN 899.

The manufacture of the 'blanks' is carried out separately and their inspection carefully monitored. As a result, the utilization of these spanners is exceeding existing requirements.

### **What are insulated hand tools ?**

These are tools with an insulating coating in order to protect the user from suffering electric shocks and to prevent short circuits between two components of different voltage.

### **What are insulating hand tools ?**

These are tools wholly made of insulating material, and can also be used with metal inserts in head piece, protecting the user from suffering electric shocks and preventing short circuits between two components of different voltage.





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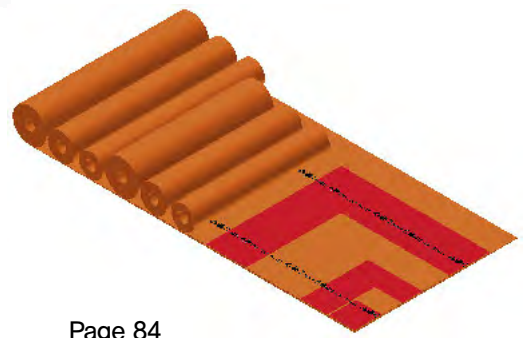
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## Electrical Safety wear and Equipment

- Gloves, Safety Fuse Holders
- Safety Suits, Safety Helmet, Safety Boots, Face Shields
- Rubber Shrouding, Standing Surface Insulation, Safety Clamps
- Push-on Safety Covers, Rubber Moulds
- Safety Covers, Covers for Cable Link Box

3



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## Electrical Safety Gloves


- Tested according to DIN EN regulation 60903, VDE regulation 0682 - Part 311
- Length 360 mm
- Excellent fit and high elasticity with maximum insulation
- Suitable to use for work under voltage
- Material: specially treated natural latex for optimal usage
- Sensitivity of touch is only slightly impaired

Order-ref.: 631618 - 631621

- Cotton lining
- Protection against electric arc
- According to EN 60903 / Directive 89/6867EWG



 1000V  
EN 60903:2003

Description		Size	Order-ref.	
Electrical Safety Gloves 500V	Cl. 00	8	631208	200
Electrical Safety Gloves 500V	Cl. 00	9	631209	200
Electrical Safety Gloves 500V	Cl. 00	10	631210	200
Electrical Safety Gloves 500V	Cl. 00	11	631211	200
Electrical Safety Gloves 1000V	Cl. 0	8	631518	200
Electrical Safety Gloves 1000V	Cl. 0	9	631519	200
Electrical Safety Gloves 1000V	Cl. 0	10	631520	200
Electrical Safety Gloves 1000V	Cl. 0	11	631521	200
Electrical Safety Gloves 1000V (cotton lining)	Cl. 0	8	631618	200
Electrical Safety Gloves 1000V (cotton lining)	Cl. 0	9	631619	200
Electrical Safety Gloves 1000V (cotton lining)	Cl. 0	10	631620	200
Electrical Safety Gloves 1000V (cotton lining)	Cl. 0	11	631621	200

It is well known that slight damage to electrical safety gloves is difficult to detect.

To improve detection, we recommend a pneumatic glove tester. The electrical safety glove is pushed over the ribbed cone of the glove tester. A large push button underneath the glove tester is pressed using both thumbs in a pumping motion. The glove is filled with air. Thin, but undamaged spots show up as a bulge, porous areas can be spotted only after dipping the air-filled glove into water. Should the glove have holes, air bubbles will appear. Such test should always be carried out before commencing work.



Glove Tester  
Order-ref. 631800

- For absorbing hand moisture and better ventilation, we recommend our cotton lined undergloves.
- The material used is unbleached and not dyed.
- A special protection for sensitive skin.
- flexible, one size only

For safe keeping we recommend:



Belt Bag



Screw Cap Tin



Protective Bag



Underglove  
Order-ref. 631000

Description	Order-ref.	
Pneumatic Glove Tester	631800	780
Underglove	631000	20
Protective Glove Bag with Belt Loop, red Plastic	631001	137
Protective Glove Bag, Sailcloth	631003	137
Plastic Screw Cap Tin for Gloves	631005	80

The I.v.h.b.c. fuse withdrawal glove is suitable for removing or fitting fuses or other pieces of equipment such as earthing and short circuit protection devices, dummy fuse components etc.

**Usage:** Accidents following the removal of live fuses have shown that the operator's hand and lower part of the arm are under severe risk from the effects of power arcing.

Fuse grips with glove surrounds should therefore always be used if accidental arcing cannot be excluded when removing or fitting I.v.h.b.c. fuses or possible load current flowing.

In such cases an additional face protection screen (LEMP 664300) or goggles (LEMP 666000) should be worn.



### Safety Fuse (NH fuse) Withdrawal Glove

- For removal of NH fuses sizes 00-3

### Leather Cover

- For existing Withdrawal Gloves

### Safety Fuse Holder

- Single

Description	Order- ref.	Length	Width	
Safety Fuse Withdrawal Glove	659001	385	220	460
Safety Fusr Withdrawal Glove (long design)	659004	445	220	460
Leather Cover, single	659302	360	220	210
Safety Fuse Holder, single	659500	40	125	250

### Adapter and Clamping Screw Spanner

- Manufactured in accordance with safety regulations for insulated tools of up to 1000 volts
- Arrangement for loosening clamping and adapter screws
- Elastic tube for catching loose parts and also avoiding unintentional short-circuiting
- Adjustable driver pin for tightening and releasing inserts 6 - 65 A



Description	Order- ref.	
Adapter and Clamping Screw Spanner	255301	100
Adapter Screw Spanner 2-63 Amp.	255401	60

### Wing Nut Spanner

- Special tool for removing or loosening of wing nuts or the 8 mm hex. bolt on meters and in control cabinets
- Head with steel inlay
- Blade made of composite material



Description	Order- ref.	Length	
Wing Nut Spanner with 8 mm Hex. Socket	136202	250	100

## Electrical Safety Suit

With regard to 'Safety Suits made from new material' a Safety Suit Combination IPS was developed. Approved by DIN VDE regulation 0680, Part 1, it reliably protects from electric shocks when working on live equipment.

Its very light weight allows work to be carried out with little effort. Owing to a newly developed material mixture, the Safety Suit IPS made of **SYMPATEX** is half as heavy as conventional rubber clothing.

Because of the breathing type of material, heat and moisture accumulation is prevented. Depending on outside temperature and physiological condition, the wearer will not perspire so much and therefore will feel comfortable. Experts from Public Electrical Services also had a say on this practical design. Numerous tests on its wearability were carried out and a two-piece, loosely worn protective clothing was designed.

Freedom of movement and excellent ventilation make it comfortable to wear.

► **Electric Arc Protection Clothing 4kA/ 0.5 sec. class1 according to EN 50286 and EN 50354.**



**Safety Jacket IPS**  
Length 90 cm  
with hood  
breast pocket with flap  
colour red-orange  
according to DIN IEC304



**Safety Trousers IPS**  
knee-breeches  
outside pocket with flap  
colour red-orange  
according to DIN IEC304

Essential safety clothing needs a reliable service.

Therefore we can provide the following:

- Cleaning
- Inspection and repair
- Repeat checks as per DIN VDE regulation 0680, Part 1

CE



500V

Description	Size	Order- ref.	⚖️
Safety Trousers	46/48	667311	800
Safety Jacket	46/48	667312	1100
Safety Trousers	50/52	667321	900
Safety Jacket	50/52	667322	1200
Safety Trousers	54/56	667331	1000
Safety Jacket	54/56	667332	1300
Safety Trousers	58/60	667341	1100
Safety Jacket	58/60	667342	1400
Case for Trousers and Jackets		667350	1000
Cleaning of Safety Jacket	46-60	667101	--
Cleaning of Safety Trousers	46-60	667102	--
Testing of Safety Jacket	46-60	667103	--
Testing of Safety Trousers	46-60	667104	--

## Electric Arc Flame and Heat Protection Clothing 7kA

The electric arc protection clothing are usable in low voltage areas in order to protect people against the danger of an electric arc. The clothing has been tested to the test methods of electric arc **ENV 50354 CENELEC class II , 7kA / 500ms** and **RWE Euro test, 10 kA / 1 sec.** They are according to EN 470-1 and EN 531 ( flame and heat protection)

- Front part and front sleeves of jacket double layer
- Jacket: 2 front pockets with flap and 2 big breast interior pocket
- Trousers: 2 side pockets, 1 back pocket with flap
- Dungarees: Fabric suspenders with stretch-piece in the back, big bib pocket with covered zipper, 2 side pockets, 1 back pocket with flap
- Norm: ENV 50354, EN 531, EN 470-1
- Material: Proban ( Cotton)
- Colour: blue
- Resists up to 7kA electric arcs ( 10kA )



Description	Order ref.	Size	Description	Order ref.	Size	Description	Order ref.	Size
Safety jacket 7kA	667411	48	Safety trousers 7kA	667412	48	Safety dungarees 7kA	667413	48
Safety jacket 7kA	667421	50	Safety trousers 7kA	667422	50	Safety dungarees7kA	667423	50
Safety jacket 7kA	667431	52	Safety trousers 7kA	667432	52	Safety dungarees7kA	667433	52
Safety jacket 7kA	667441	54	Safety trousers 7kA	667442	54	Safety dungarees7kA	667443	54
Safety jacket 7kA	667451	58	Safety trousers 7kA	667452	58	Safety dungarees7kA	667453	56

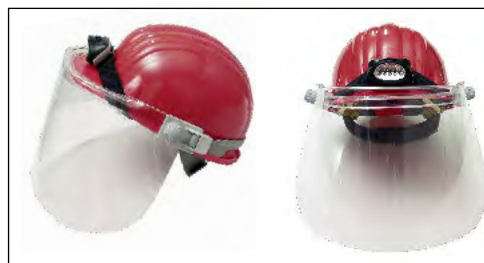
## Safety Helmet for Electricians

- Complying with DIN EN 397 regulation
- With rain drain and ventilation on both sides
- Case holding face and hearing protection
- Adjustable chin strap, including sweat band



440V AC CE

- Additional with flashing light
- 3 Battery "Micro/AAA" 1.5V (not included in delivery)
- The Lamp is separable from the flexible headband and has a magnet base



Storage case  
Ø 25 cm x 40 cm  
Order ref. 662805

Face Shield  
Order ref. 664300



Assembly instruction for Safety Helmet

Description	Order ref.	Colour	⚖
Safety Helmet	662000	white	335
Safety Helmet	662001	yellow	335
Safety Helmet	662002	red	335
Head Lamp with 5 LEDs "LED-Headlight"	537035		50
Perspiration Absorption Piece	662801		4
Chin Sprap for Safety Helmet	662802		57
Paper Liners (Pack of 10)	662803		40
Storage Case for Helmet and Safety Face Shield	662805	red	350

## Helmet with built-in visor for electricians

- Protective Helmet according to DIN EN 397
- With built-in folding, Visor; offering complete Protection of the face
- To protect electricians from accidental switching and flame arc on live voltage
- Proved and admitted to VDE 0680 Part 1
- Visor: scratchproof polycarbonate, colourless/transparent 2 mm thickness
- Comfortable adjustable; from size 52 to 66
- Comfort Padding:  
6-Point Belt with Frontsweatband, adjustable and padded chin strap

- ▶ Above average arc resistance of Helmet with built-in visor (Information on demand)



Storage Case  
Ø 25 cm x 40 cm  
Order ref. 66280501



Identification according to test standard



1000V

VDE 0680 T 1

CE 440V AC

EN 397

Description	Order- ref.	Colour	⚖
Protective Helmet with integrated Visor	662500	white	700
Protective Helmet with integrated Visor	662510	red	700
Replacement shield	662590		100
Soft Cap (Pack of 10) for Helmet	662803		40
Storage case for Helmet with Visor	66280501	red	350

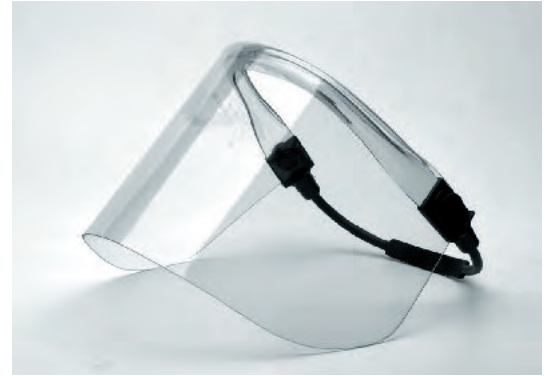
### Face Shield with head holder

- This face safety shield must be worn without helmet
- Head piece individually adjustable for size
- Transparent forehead protection
- Shield made from Acetate fibre, colourless, 440 x 250 x 1.5 mm thick, can be raised



### Face Shield with helmets holder (Edges rounded and polished)

- A well-tested and high-quality face safety shield to wear with safety helmet
- Protecting against wrong operation and effects of flame arc while working on service boxes and control cabinets or electrical service personnel in Public Service Companies who are requested to wear safety helmets
- DIN tested and VDE approved (VDE 0680/Part 1, 1000 V, D.C.)
- Spring bracket of U-shaped plastic with non-slip rubber cord for holding helmet in position
- Shield made of Acetate fibre, colourless/transparent, 460 mm wide x 200 mm high x 1.5 mm thick
- Full protection of facial area and over ears
- Special coating on face safety shield prevents misting-up
- Anti-glare screen is a darkened foil strip, size 30 cm x 8 cm, which can subsequently be fixed to shield at eye level, to protect eyes against arcing faults



Description	Order ref.	
Face Shield with head holder VDE	664100	420
Face Shield with helmet holder	664300	270
Anti glare screen for Face Shield Order ref. 664300	664302	230
Helmet holder for Face Shield Order ref. 664300	664303	30

### Safety Bag

Safety Bag with protective padding



Sample picture

Description	Order ref.	INT Id.	Dimensions	
Safety Bag, empty	662808	AB7710	560x360x320mm	approx. 1700

Description	Order ref.	INT Id.	Dimensions	
Safety Bag, fully equipped	662810	AB7711	560x360x320mm	approx. 8200

consisting of:

Description	Order ref.	Description	Order ref.
Electrical Safety Gloves class 0 - Size 10	631520	Protective Helmet for Electrician's	662000
Safety Goggles	666000	Face Shield with helmets holder	664300
Rubber Matting surface	642300		

### Safety Goggles

- complies with standard EN 166 3-1.21F
- light weight and comfortable
- clear scratch-resistant spectacle glass
- modern design



CE

Description	Order- ref.	⚖
Safety Goggles (Polycarbonate)	666000	27

### Hearing Protection

- complying with EN 352-1 regulation
- universal head frame giving constant pressure can be worn on head or under chin
- can be worn together with safety helmet
- ear-muffs are fitted with soft, wide and replaceable padding which spreads the pressure, making them comfortable to wear
- medium and high frequencies are especially muffled, yet communication is not hampered due to relative penetration of low frequencies



CE

Description	Order- ref.	⚖
Hearing Protection	666010	320

### Electrical Safety Boots

- complying with EN 345
- Safety Boots with steel toe cap
- legs and soles are resistant to oil, petrol, grease, alkaline solution and acid complying with VDE 0680 Part 1
- Colour: Shaft white, Sole: blue



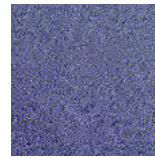
CE



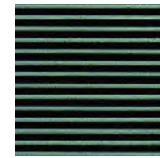
Description	Order- ref.	Size	Hight	⚖
Electrical Safety Boots	661340	40	380	2100
Electrical Safety Boots	661341	41	380	2200
Electrical Safety Boots	661342	42	380	2300
Electrical Safety Boots	661343	43	380	2400
Electrical Safety Boots	661344	44	380	2500
Electrical Safety Boots	661345	45	380	2600
Electrical Safety Boots	661346	46	380	2700
Electrical Safety Boots	661347	47	380	2800

## Safety Rubber Matting

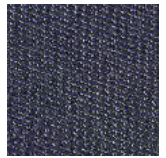
- Protective floor mat to lay out permanently in electrical control- and test rooms
- Upper side ribbed or textile pattern, underside smooth, grey
- Hardness 77° Shore, density: 1.65 g/cm<sup>3</sup>
- electric strength: 50.000 Volts as per VDE regulation 0303
- Rolls available in length of up to 20 m and 1.2 m wide (please pay attention to the weight)
- At ribbed upperside - underside with stamp



smooth



ribbed



cloth patterned

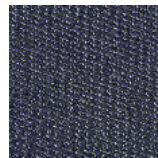
Description	Order- ref.	Length	Width	Thickness	
Rubber Mat upperside ribbed, unders. smooth	642200	1000	1000	4.5	8,5 kg
Rubber Mat upperside ribbed, unders. smooth	642210	10000	1000	4.5	105 kg
Rubber Mat upperside ribbed, unders. smooth	642212	10000	1200	4.5	75 kg
Rubber Mat uppers. textile pat.,unders. smooth	642500	1000	1000	4.0	6 kg
Rubber Mat uppers. textile pat.,unders. smooth	642510	10000	1000	4.0	60 kg

► Other cuts and dimensions available

## Rubber Insulating Matting

- Safety mat for standing surface insulation to be used when working on components under voltage of up to 1000 V
- Frost-resistant
- Complying to DIN VDE 0680 Part 1:1983-01
- Hardness: 53° Shore; density: 1.20 g/cm
- Mat belongs to the personal protective shielding - Portable mat -not for permanent fitting

- upperside und underside: **textile pattern, grey**



Description	Order- ref.	Dimensions	Thickness	
Rubber Insulation Matting	642300	1000 x 1000	4.0	4.5 kg
Rubber Insulation Matting	642310	10000 x 1000	4.0	45 kg
Rubber Insulation Matting	642600	1000 x 1000	3.0	2.9 kg
Rubber Insulation Matting	642610	10000 x 1000	3.0	29 kg

► Other cuts and dimensions available

1000V  
EN/IEC 60900:2004



1000V

## Storage Case for Rubber Mat

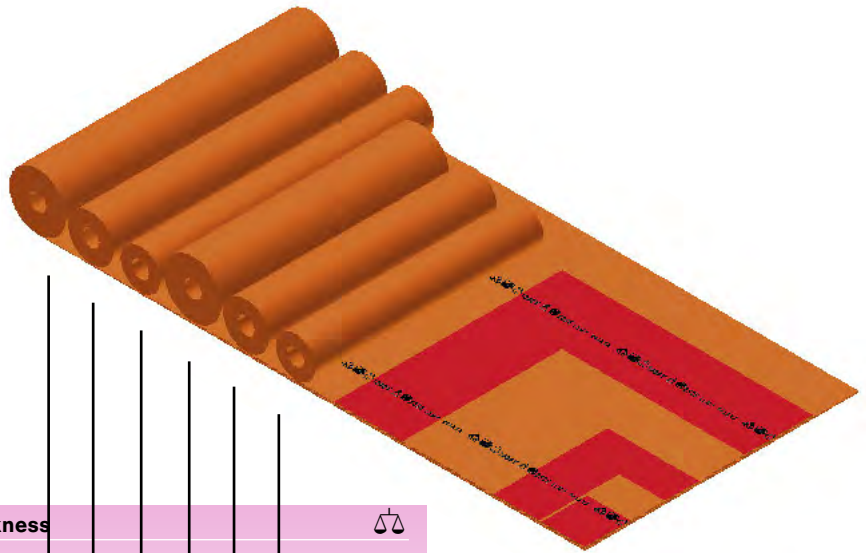
- Material: imitation leather



Description	Order- ref.	Length	Width	Height	
Storage case for Rubber Mat	732310	1000	130 Ø		500
Storage case for Rubber Mat	732306	1200	130 Ø		540

## Rubber Cover Material

- Complying with VDE regulation 0680/Part 1/ Para 3.8
- Used when working on electrical devices
- Material: NEOPRENE
- Smooth on both sides, colour orange
- Hardness 44° Shore; density 1.21 g/cm³



### Roll:

Description	Order ref.	Dimension	Thickness	Weight
On a Roll	641314	10000 x 1200	2.5	40 kg
On a Roll	641310	10000 x 1200	1.6	30 kg
On a Roll	641210	10000 x 1200	1.0	19 kg
On a Roll	641311	10000 x 1000	2.5	32 kg
On a Roll	641309	10000 x 1000	1.6	25 kg
On a Roll	641209	10000 x 1000	1.0	15,5 kg



### Standard Cuts:

Description	1.0 mm Thickness	1.6 mm Thickness	2.5 mm Thickness
Rubber Cover Material 1200 x 1200 mm	641208 1742	641308 2790	641307 4356
Rubber Cover Material 1000 x 1200 mm	641211 1500	641320 2300	641313 3630
Rubber Cover Material 1000 x 1000 mm	641205 1210	641305 1936	641306 3025
Rubber Cover Material 600 x 600 mm	641204 436	641304 697	
Rubber Cover Material 250 x 350 mm	641203 106	641303 170	
Rubber Cover Material 130 x 230 mm	641202 36	641302 58	
Rubber Cover Material 120 x 120 mm	641201 17	641301 28	

► Other cuts and dimensions available

## Cover Material Transparent

- Complying with DIN VDE 0680 Part 1:1983-01
- Highly flexible, frost-resistant
- Material: UV-resistant plastic
- Cuts can be fitted with Velcro fastening



### Roll:

Description	Order- ref.	Dimension	Thickness	Weight
On a roll	641950	50000 x 1300	0.5	40000



### Standard Cuts:

Description	Order ref.	Thickness	Weight
Cover Material transparent 10000 x 1300 mm	641960	0.5	8000
Cover Material transparent 2000 x 1300 mm	641952	0.5	1600
Cover Material transparent 1000 x 1300 mm	641951	0.5	800
Cover Material transparent 600 x 600 mm	641949	0.5	220
Cover Material transparent 250 x 350 mm	641948	0.5	50
Cover Material transparent 130 x 230 mm	641947	0.5	20
Cover Material transparent 120 x 120 mm	641946	0.5	10

► Other cuts and dimensions available

### Silicone Coated Shrouding

- Material: glass fibre fabric with a silicone coating
- Heat, cold and UV resistant
- Highly flexible, even in cold weather conditions
- Protects against flying sparks (cutting and welding)
- Almost non-ageing
- Crease resistant, even if permanently folded



Roll:

Description	Order ref.	Dimensions	Thickness	
On a roll	643410	10000 x 1150	1.2 mm	11000



Standard cuts:

Description	Order ref.	Thickness	
Silicone Coated Shrouding	2000 x 1150 mm	643412	1.2
Silicone Coated Shrouding	1000 x 1150 mm	643401	1.2
Silicone Coated Shrouding	600 x 600 mm	643402	1.2
Silicone Coated Shrouding	500 x 500 mm	643405	1.2
Silicone Coated Shrouding	300 x 300 mm	643403	1.2

► Other cuts and dimensions available

### Hook and Eye for (strengthening) Rubber Sheet (for reinforcement)

- The Rubber Coated Shrouding is provided with 14 mm holes
- In the holes the eyes were force together
- S-shaped, 10 mm thick insulation hook
- A fully assembled sheet is available on request



Description	Order ref.	
Plastic Eyelet	638000	6
Plastic Hook	638001	35

similar to figure

### Protective Cover for Overhead Lines

- For crossovers in the low voltage overhead lines
- Smooth NEOPRENE rubber quality
- UV-resistant
- With fastening buttons and sealing section

► Other cuts and dimensions available



Description	Order ref.	Length	Height	Thickness	
Protective Cover	656000	600	250	1.0	600

## Safety Clamp for Shrouding

The LEMP Safety Clamp is available in a short and long design. Link pieces attached to the hooks of the longer clamp enable any number of clamps to be joined together. No other resource makes the work with insulating covers so safe and so simple.

- With rubber contacts in headpiece
- Joint with special guide ring
- Hi-performance spring made of piano wire steel
- Clamps and hooks made of non-brittle plastic
- Available in different colours on demand



Safety Clamp  
Order ref. 651406



Safety Clamp  
with Hook  
Order ref. 651402



Safety Clamp  
short design  
Order ref. 651409



Safety Clamp  
without Hook  
Order ref. 651407

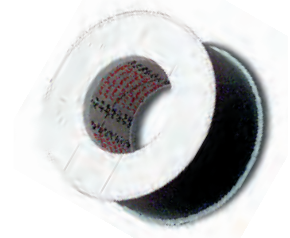


Safety Clamp  
with 65 mm opening  
Order ref. 651412

Description	Order ref.	Length	Opening	Width	⚖
Safety Clamp with Hook	651402	165	45	130	60
Safety Clamp without Hook	651407	175	40	110	76
Safety Clamp 65 mm opening	651412	160	65	115	70
Safety Clamp short	651409	140	45	85	52
Safety Clamp	651406	80	25	40	40

## Insulation Tape

- Complying with VDE 0340 DIN 40633 regulation
- For free installed conductions
- Black
- Made of PVC, with 0.5 mm thickness



Description	Order- ref.	Length	Width	⚖
Insulation Tape	643300	8000	50	280

## Case for Insulation Materials

- Used for rubber shrouding and safety clamps
- Material: imitation leather

## Case for rubber shrouding

- Material: imitation leather



Order ref. 737011

Description	Order- ref.	Length	Width	⚖
Case for Cover Materials	737011	570	270	360
Storage case for Rubber Mat	732306	1200	130 Ø	540

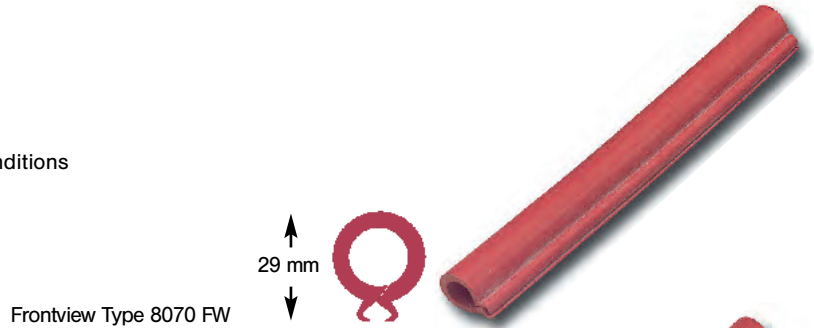
## Protecting Tube

- LEMP sleeving is available in various lengths and sizes.
- Ideal when used together with insulation shrouding
- Excellent UV and weather resistant qualities
- Easy to apply to overhead lines. Could be affected by oxide deposits on lines
- At appropriate handling the covers give protection from direct touch (IP 2x / EN 60529)



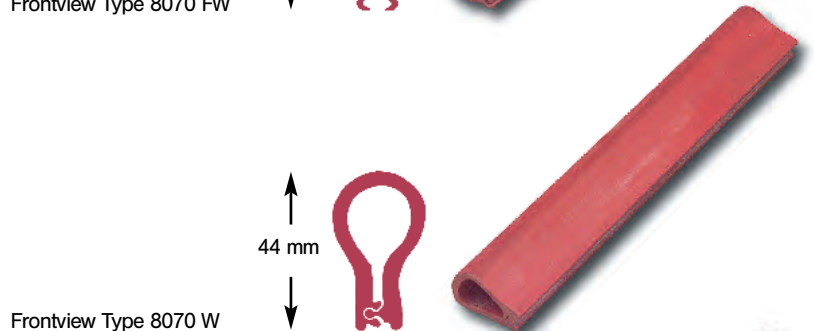
### Type 8070 FW

- Light design, for conductor diameter of up to 15 mm
- Additional edges for increased protection in damp conditions
- Highly resistant to UV and Ozone



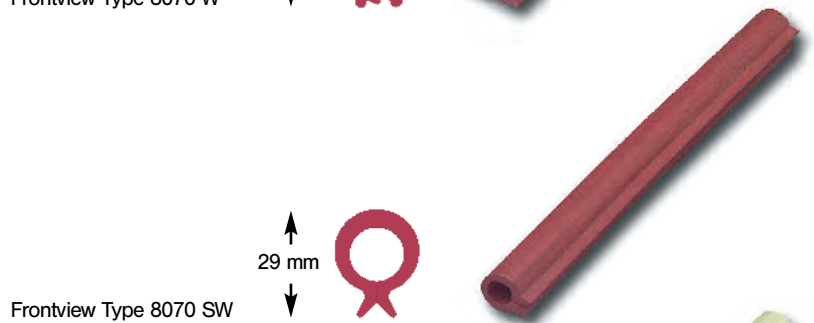
### Type 8070 W

- Strong design, for conductor diameter of up to 16 mm
- Highly resistant to UV and Ozone



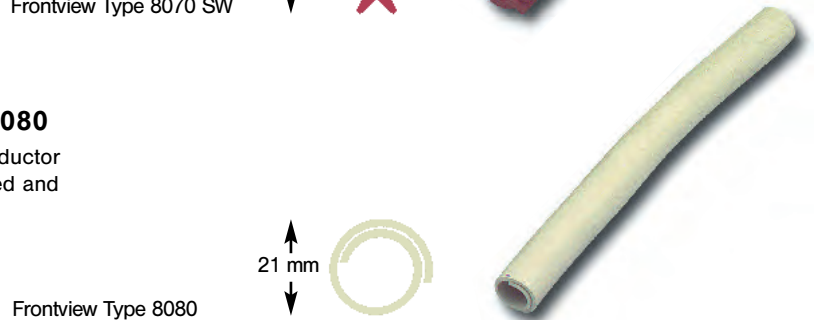
### Type 8070 SW

- Light-design, for conductor diameter of up to 13 mm
- Highly resistant to UV and Ozone



### Protecting Tube for overhead lines Type 8080

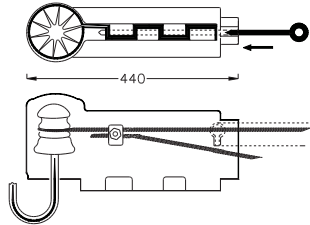
- Spiral-shaped, provides an all round insulation of conductor
- Due to the soft rubber mixture, the tubing can be coiled and is easy to carry



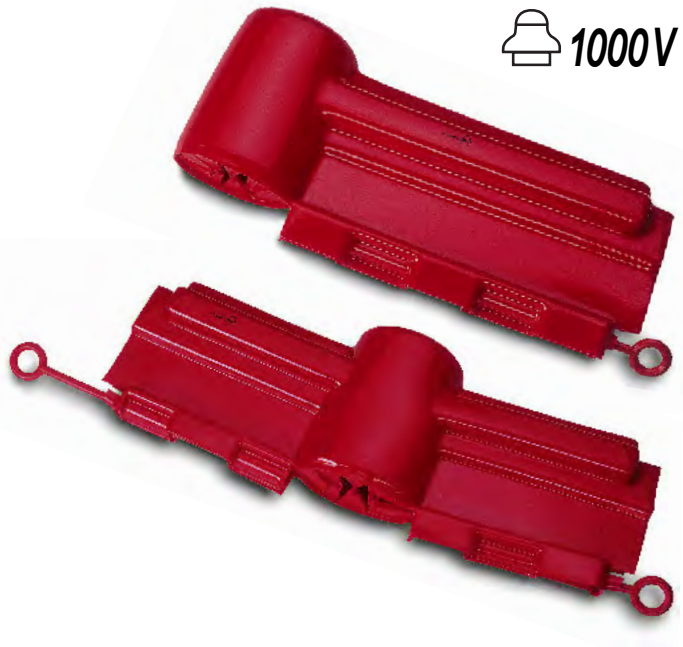
Description	Length	Order ref.	⚖️	Order ref.	⚖️	Order ref.	⚖️	Order ref.	⚖️
Protection Tube	1000	657501	340	657601	600	657711	340		
Protection Tube	2000	657502	680	657602	1200	657712	680		
Protection Tube	3000	657503	1020	657603	1800	657713	1020		
Protection Tube	4000	657504	1360	657604	2400	657714	1360		
Protection Tube	5000	657505	1700	657605	3000	657715	1700		
Protec.Tube for overh. lines	10000							658310	2800

### Insulator Cap for Gable Insulators with plenty of inside space for clamps

- With locking pin, securely fixed even in bad weather
- Good clamping effect, suitable for all types of conductor caps
- Generous inside space for clamps
- Shock-hazard protection of insulator, also the under-side
- Made from soft, weather-proof insulation material
- Suitable for long-term operations

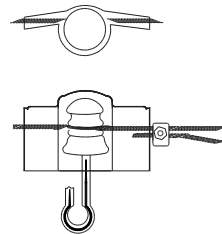
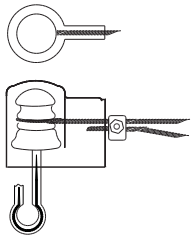


 1000V



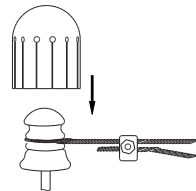
### Insulator Cap with single or double outlet


- Simple and robust design to slide over
- Made of soft, weather-proof insulation material
- Suitable for long-term operations



### Insulator Cap with 12 outlets

- Simple and robust design for insulators with several terminals
- In windy conditions, an additional fastening device should be used (i.e. a clip)
- Made of soft, weather-proof insulation material
- Suitable for long-term operations



Description	Order ref.	
Insulator-Cap, large with Securing Pin	655305	1500
Insulator-Cap, large with Securing Pin and two outlets	655306	2000
Insulator-Cap with 1 outlet	655200	350
Insulator-Cap with 2 outlets	655300	450
Insulator-Cap twelfefold split	655301	310

### Cover for NH Fuse Lower Part 170 x 140 260 x 140

- Made of soft, absolutely weather-proof insulation material
- For covering spring contacts




### Cover for NH Fuse Lower Part 330 x 170

- Made of soft, weather-proof insulation material
- For covering two spring contacts when using I.v.h.b.c. fuse

 1000V



Description	Order ref.	Dimensions (L x B x H)	
Cover 170 x 140 mm for NH-Fuse Lower Part	647317	45 x 55 x 45	160
Cover 260 x 140 mm for NH-Fuse Lower Part	647326	45 x 55 x 45	300
Cover 330 x 170 mm for NH-Fuse Lower Part	648300	170 x 60 x 65	510

### Cover for Automatic Cut-Out


- Made of soft, absolutely weather-proof insulation material
- To uncover the contacts of Automatic Cut-Out



 1000V

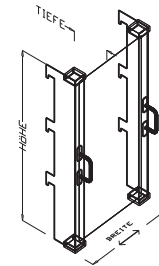
Order ref. 647052

Order ref. 647054

Description	Order ref.	
Cover for Automatic Cut-Out 2-way	647052	20
Cover for Automatic Cut-Out 4-way	647054	40
Cover for Automatic Cut-Out 6-way	647056	60
Cover for Automatic Cut-Out 8-way	647058	80

### Variable Cover for Cable Distribution Cabinet

- The cover is made of a transparent foil which by means of spring loading rolls itself up and out.
- The side angles are hooked on behind the busbar, thus giving the foil the necessary stability.
- The retractor mechanism is fully insulated and has, apart from the torsion spring, no other metal parts.
- All parts are replaceable if necessary.
- The sides are made of 4 mm thick insulation material. Foil thickness is 1 mm (on request 0.5 mm).
- The dimensions of the sides can be adjusted to length and shape of various types of distribution boards.
- The length and width of foil is altered accordingly.
- The foil complies with VDE regulation 0680, Part 1/01.83 and has the VDE/GS approval mark.



 1000V

Description	Order ref.	Height	Width	Depth	
Variable Cover for Cable Distribution Cabinet	655400	930	150 to 800	251	5500
Variable Cover for Cable Distribution Cabinet	655405	700	150 to 800	251	4500


► We produce other dimensions on demand.

### Temporary Protective Cover for Distribution Cabinet

- This plastic cover provides temporary protection to damaged feeder pillars and distribution boxes.
- There is a hem at the bottom through which a tightening band is passed, so as to securely tie the bottom of the cover to the cabinet.
- The protective cover is made of 1 mm thick highly flexible, transparent plastic.
- Also available with height of 1100 mm.



 1000V

Description	Order ref	H x W x D	suitable for Equipment Cabinet	
Plastic Protective Cover	066147	900 x 550 x 440 mm	00	2600
Plastic Protective Cover	066148	900 x 700 x 440 mm	0	3100
Plastic Protective Cover	066145	900 x 900 x 440 mm	1	3800
Plastic Protective Cover	066146	900 x 1300 x 440 mm	2	5100
Plastic Protective Cover	066149	900 x 1600 x 440 mm	3	6300

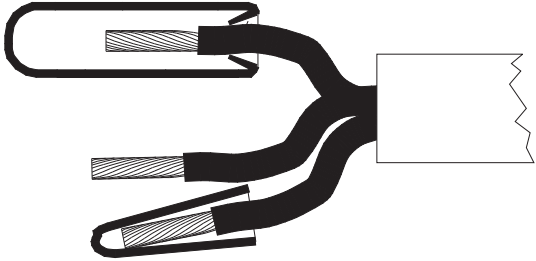
► We produce other dimensions on demand.

## Push on Cover

for uninsulated electric cable ends of all common cross sections and materials

### with grip

- Made of two different types of plastic
- Body made of strong, dimensionally stable insulation material
- Gripping collar very flexible
- No deformation of copper wires when applied
- High degree of friction resistance when removed
- Staying absolutely and reliably in place
- Can also be used for cable lugs etc



### conical

- Made of strong, resilient insulation material
- Safely fastened even with irregular cross sections
- Available with imprint L1, L2, L3



Slip Over Side  
without grip

Order ref. 646004



Order ref. 646030



Slip Over Side  
with grip



Order ref. 645000



Order ref. 645001



Order ref. 647030



Description	Order-ref.	Length in mm	Opening Ø in mm	suitable for	⚖
Push on cover with grip	646004	40	10	1 - 25 mm <sup>2</sup>	4
Push on cover with grip	646006	60	10	6 - 35 mm <sup>2</sup>	14
Push on cover with grip	646010	100	10	6 - 35 mm <sup>2</sup>	21
Push on cover with grip	646015	100	15	10 - 50 mm <sup>2</sup>	31
Push on cover with grip	646020	110	20	35 - 95 mm <sup>2</sup>	40
Push on cover with grip	646030	130	30	95 - 185 mm <sup>2</sup>	70
Push on cover with grip	646040	150	40	185 - 240 mm <sup>2</sup>	135
Push on cover with grip	646045	180	45	240 - 300 mm <sup>2</sup>	155
Push on cover with grip	646050	185	50	240 - 400 mm <sup>2</sup>	140
Push on cover with grip	646060	185	60	240 - 500 mm <sup>2</sup>	220
Push on cover with grip	646070	210	70	300 - 500 mm <sup>2</sup>	300
Push on cover with grip	646090	255	90	630 mm <sup>2</sup>	550
Push on cover with grip	646120	240	120	800 mm <sup>2</sup>	700
Push on cover conical	647030	30	10	10 - 25 mm <sup>2</sup>	10
Push on cover conical	645006	50	10	10 - 25 mm <sup>2</sup>	10
Push on cover conical	647010	60	10	6 - 25 mm <sup>2</sup>	15
Push on cover conical	645000	100	10	10 - 35 mm <sup>2</sup>	7
Push on cover conical	645001	100	20	120 - 150 mm <sup>2</sup>	19
Push on cover, transparent, conical	645005	50	4	1 - 6 mm <sup>2</sup>	10
Push on cover, transparent, conical	645004	40	6	10 - 25 mm <sup>2</sup>	10

## Insulating Grommets 1000V

- To protect rigid cables
- Material: rigid thermoplastic resin
- Colour: red
- Norm: VDE 0680



1000V  
EN/IEC 60900:2004

Description	Order-ref.	INT-Id.	Length in mm	suitable for	⚖
Insulating push on cover	646160	AV4094	60	8 - 13 mm <sup>2</sup>	6
Insulating push on cover	646180	AV4095	80	13 - 20 mm <sup>2</sup>	10

## Industrial Insulation Plug (can be lead sealed)

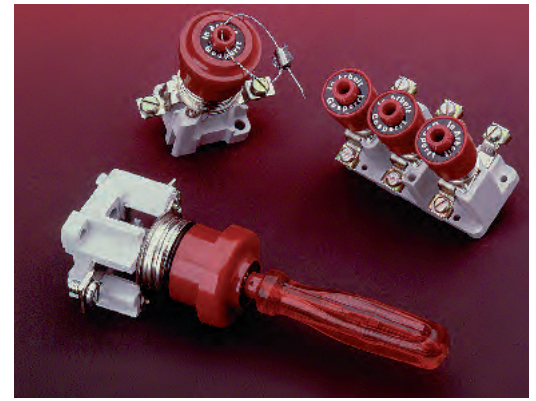
The patented Industrial Blocking Cap guarantees protection for people working on electric circuits.

The blocking cap is a well proven safety device to prevent re-energising (VDE 0105).

The blocking cap is fitted to the bottle fuse base with a special spanner in place of the fuse-unit with screw-type cap. Removal of blocking cap by an unauthorized person is not possible.

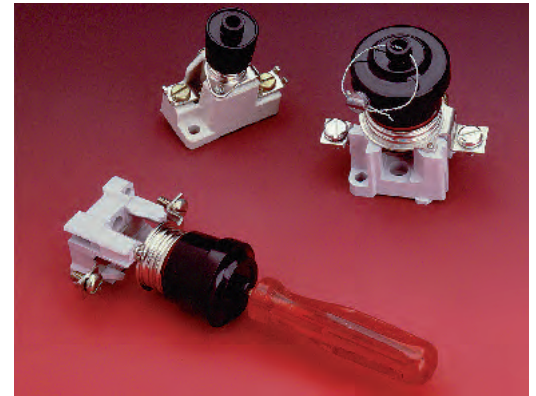
### „Industry“-Insulation Plug

- The blocking cap has a very distinctive red top part and has **In Operation – closed off** written on it
- Special key to actuate (with 2-Surface Grinding)
- Can be lead sealed.



### „Antilux“-Insulation Plug

- The Antilux insulation plugs are primarily used for cutting off electricity supply to consumers failing to pay the electricity bill without employing skilled personnel, which is time-consuming and costly, for re-connection of cables to fuse elements.
- It is easy to handle and can be carried out by the meter reader or money collector. Further electricity supply is stopped.
- The blocking caps are black and without inscription
- Special key to actuate (with 2-Surface Grinding)
- Can be lead sealed.



Description	„Industry“- Order ref.	„Antilux“- Order ref.	⚖
Insulation Plug D 01 for screw thread E 14 (NEOZED2 -16 A)	659514	659553	30
Insulation Plug ND for screw thread E 16	659516	659554	30
Insulation Plug D 02 for screw thread E 18 (NEOZED20 -63 A)	659518	659555	40
Insulation Plug D II for screw thread E 27	659520	659560	40
Insulation Plug D III for screw thread E 33	659530	659570	60
Special Key for Insulation Plug	659550	659580	50

## Cover for NH - Lower Part

- The safety for electricians working on low voltage cable systems must be of prime importance to Public Services Companies dealing with safety matters.
- The dummy and holder cover guarantee utmost protection in case of accidentally connecting electrical devices such as l.v.h.b.c. fuse units, disconnecting blade etc., thus providing safe conditions for electricians working away from the place of circuit connection.
- The red and yellow colour combination indicates a possible source of danger.
- Grip lugs suitable for l.v.h.b.c. fuse units complying with DIN 43620 allow the use of l.v.h.b.c. fuse grips (LEMP 659001) which conform to VDE regulation 0680, Part 4



Warning Sign  
Order ref. 659505



Order ref 659503

Order ref. 659504

Order ref. 659501

Order ref. 659502



Description	Order ref.	DIN-Size	—mm—	⚖
Cover for NH-Lower Part Size I	659501	00	100 x 30 mm	50
Cover for NH-Lower Part Size II	659502	1-3	150 x 60 mm	85
Cover for NH-Lower Part Size I with Clamp cover	659503	00	120 x 35 mm	40
Cover for NH-Lower Part Size II with Clamp cover	659504	1-3	190 x 60 mm	120
Warning Sign "Work under Voltage - Nichts verändern"	659505		200 x 170 mm	20
Safety Fuse Withdrawal Glove (Picture. S.77)	659001			460



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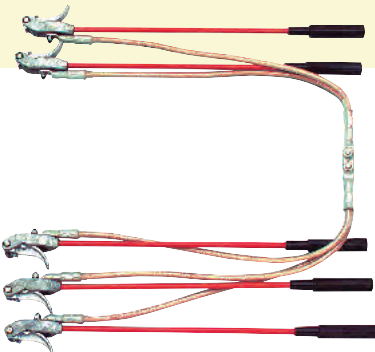
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### Voltage Detector, Earth Connection and Bridging Device

- Voltage Detector
- Continuity Tester
- Short Circuit Device for Low-Voltage Overhead Wire, Cable Distribution Cabinet
- Short Circuit Device for lower part of NH Fuse, Screw Safety Clamps
- Current Collector Device
- Shunt / Bridging Device



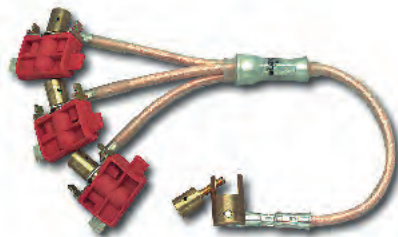
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## Voltage and Pole Tester Type Analogue 12 - 750 V

- Indication of direct and alternating voltage: LED / moving coil
- Display Panel: 12, 24, 50, 120, 230, 400, 500, 750 V
- Cyclic phase direction-/ phase- tester: LCD, polarity tester: LED
- Load connection via push buttons:  $I_S < 50 \text{ mA}$
- Protection class: IP 64 (dust proof / splash proof)
- Proved and certified according to: IEC 61243-3, VDE 0682 Part 401

### Practical accessories:

#### Black case

- With zip
- Suitable for order ref. 012010 and 012011



Description	Order- ref.	⚖
Voltage and Pole Tester Type Analogue	012010	250
Case for Voltage tester, black	012013	80

## Continuity Tester

- Visual continuity test via light emitting diode (LED) and audio continuity test via a loud buzzer
- LEDs indicate low resistance as well as high resistance test region
- Polarity tests can be done on electrical parts such as semiconductors
- The device can operate as a torch via switch.  
The reflector allows maximum illumination
- The DUTEST control is voltage proof up to 400 V and has a battery charge acceptance of three 1.5 V miniature cells
- The housing is impact resistant and unbreakable and complies with IP 40
- The device is VDE approved and can be used on electrical installations up to 400 volt



Description	Order- ref.	⚖
Continuity Tester control	012025	180

## Voltage and Pole Tester Type Digital plus 1,5 - 750 V

- LCD Display with background light three digit for direct and alternating voltage
- Voltage display : 1.5 - 750 V
- Vibrating alarm for safe voltage detection
- Cyclic phase direction / phase tester: LCD, polarity test: LED
- Load connection via push buttons  $I_S < 200 \text{ mA}$
- Precise illumination of the measuring point
- Protection class: IP 64 (dust proof / splash proof)
- Tested and approved according to: IEC 61243-3, VDE 0682 Part 401
- Incl. 2 x 1.5 V micro-battery (AAA)

### Practical accessories:

#### Black imitation leather case

- With slide fastener
- Suitable for order ref. 012010 and 012011



Description	Order- ref.	⚖
Voltage and PoleTester Type Digital plus	012011	250
Case for Voltage tester, black	012013	80

## Testboy Profi LCD - Two pole Voltage Tester

- Displays direct - and alternating Voltage from 12 to 690 Volt
- Single-pole phase testing
- Two-pole phase sequence testing
- Continuity testing up to 2000 Ohm
- FI/RCD-fault test
- Rotating field display
- Automatic switch-off
- Precise measurement with LCD-Display

### Specification:

- Display : LCD, 3.5 digit, LCD for phase and rotary field, 4 LEDs for ACV, DCV, Ohm and Data Hold
- Operating Panel : ON/OFF button, D-H button, finger tip
- Measurement range : automatic range 12 - 690V AC/DC, 0 - 400 Hz, 0 - 2000 Ohm
- Continuity Test : 0 - 35 Ohm with signal alarm
- Phase Indication : > 100 V AC
- Automatic Resistance : 1s - 30 mA ED(DT) = 30 sec.
- Power Supply : 2 x 1.5 V Type AAA Micro
- Protection Class : IP 65
- Overload Category : CAT IV 1000 V
- TÜV/GS : IEC/EN 61243-3
- Colour : red / black other colours on request
- Optional : Case



Description	Order- ref.	Dimension	
Testboy Profi LCD - Two pole Voltage tester	013390	238x70x30mm	200

## Voltage Tester

150 - 250 V

- Complying with VDE regulation 0680
- Measuring range 150 - 250 V



Description	Order- ref.	mm	mm	
Voltage Tester VDE, 150 - 250 V	010300	153	65	25

## Voltage Detector Testboy with Flashlight

12 - 1000 V and 120 - 1000 V

- Non contact voltage tester for alternating voltage from 12 - 1000 V (Testboy 100) and 120 - 1000 V ( Testboy 110) CAT III 1000V
- Made of impact resistant and unbreakable ABS plastic.
- The non contact voltage testers can detect live wires in splices,cable drum, socket outlets and switches.
- A defective lamp in a chain of lights can be localised within seconds. An invisible cable breakage in an extension lead is indicated to within a tolerance of just a few millimetres.
- When the LED-torch glows a voltage is detected
- The Testboy is equipped with an LED torch to allow the service personnel to work safety in dark rooms.



Description	Order- ref.	Length mm	
Voltage Detector Testboy 100	010500	160	80
Voltage Detector Testboy 110	010550	160	80

## Magnet Field Tester Testboy with Flashlight

- The magnet field is suitable for test magnetic valves and magnet coils in the automotive industry and mechanical engineering.
- All perm. and synthetic magnetic fields are indicated by the tip lighting up.
- The Test lamp reacts to magnetic fields by Alternating Voltage, Direct Voltage and permanent magnet.
- The sensitivity of the device is such that the lid or covering need not be removed or dismantled.
- The magnet coil can also be tested under the safety device.
- The Testboy is equipped with an LED torch to allow the service personnel work safety in dark rooms.



Description	Order- ref.	Length mm	
Magnet Field Tester Testboy 120	010600	160	60

## Phase sequence indicator

- Indicates the sequence using a rotary disc
- Equipped with protective fuse
- Compact and sturdy
- For use on 110 to 480V power lines
- Operation with frequencies from 40 to 70Hz
- Standards: CEI EN 61010 2 031
- All contained in a hand protective case
- 2 test prods with snap on alligator clips



CE

Description	Order- ref.	INT-Id.	Dimension	
Cyclic Phase direction indicator	01203901	AM 0101	95x75x55mm	450

## Voltage Tester

- Double pole voltage testing device complying with VDE regulation 0680, Part 5, (rotating field, with or without phase tester Order ref 01330401 or 01330501)
- Basic measuring range from 500 to 1000 V
- Rubber encapsulated and therefore hard wearing and durable
- Dust and splash proof IP65

### Specification:

- Direct and alternating voltage by synchronizing glow lamp for double display check = > 80 V
- Display of direct and alternating voltage (r.m.s. value) by moving iron measuring element, type 2.5
- Large 90 degree scale
- Direct voltage polarity
- Phase by single pole application, separate glow lamp (01330401 or 01330501)
- Unbreakable plastic disc over display
- Current : 11.5 mA at full scale deflection, permanent
- Frequency range : 0.-100. Hz
- ON period : 30 seconds
- Peak voltage proof : 10 kV
- Overload Category : CAT IV
- Temperature range : -10°C to +50°C
- Test voltage : 5 KV
- Cable : H 07 RNF 1 x 1.5 / 1 m long

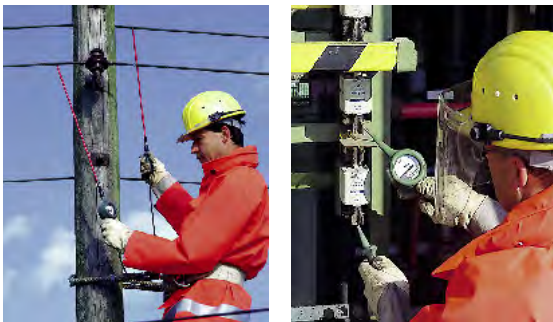


### Fittings



## Version with acoustic signal alarm

- Basic properties as 01330501, but the voltage will be indicated with a loud intermittent signal (above 57 dB).
- Current: : 25mA on full current alarm



Description	Length	Order- ref.	
Voltage Tester 100 V/500 V without Phase tester LCD/LED		01330001	480
Voltage Tester 500 V with Phase tester Phase-sequence indicator + Signal alarm/Continuity Tester		01330402	480
Voltage Tester 500 V with Phase tester Phase-sequence indicator		01330501	480
Voltage Tester 1000 V		01331001	480
Voltage Tester 1000 V Phase/Rot.field/Continuity Tester		01331502	490
Voltage Tester 1000 V Phase/Rot.field		01331501	490
Cable plunge prod	70	013311	100
Extension prod	135	013313	20
Overhead line prod	500	013332	60
Overhead line prod	600	013334	80
Case for Voltage Tester	370x160x70	013800	180

## Twin Prod voltage and Continuity Tester

- Covers the complete voltage range from 12 - 690V
- Twin Prod Voltage Tester to VDE 0680 part 5 with phase tester, continuity test, polarity indication and phase rotation indication.
- Water and dust proof.
- Impact resistant transparent cover over the indicating scale

### Specification:

- Nominal Voltage : 12 - 690 V AC/DC
- Voltage indication by means of stepped LED's: 12, 50, 120, 230, 400, 690 V  
automatic indication of AC/DC and polarity +/-
- Peak current consumption : < 30 mA
- Frequency range : 0 - 2000 Hz
- Continuity : 0 - ca. 500 kOhm by means of rectangular LEDs
- Switch on time : 30 seconds (before automatic switch off)
- Phase : Single pole plus moving electrode with triangular LED
- Phase rotation : Two poles plus moving electrode with triangular LED
- Peak voltage withstand : >5 kV on voltage and continuity test
- Temperature range : -10° C to +50° C
- Power source : Long life operation with lithium battery together with solar power
- Housing : Impact resistant ABS, protection IP 65
- Cables : H 07 RN-F 1 / 1m long
- Overload Category : CAT IV 1000V



Description	Order- ref.	
Twin Prod voltage and Continuity	013400	170

## Two Pole Voltage and Continuity Tester

- Voltage range : 8-1000 V
- Two pole voltage tester to VDE 0680 part 5 with digital volt meter up to 1200 V together with continuity tester to 750 kOhm and acoustic signal.
- Phase-sequence test
- Protected against water and dust.
- Impact resistant transparent cover over LCD display

### Specification:

- Voltage range : 8 - 1000 V AC/DC
- Voltage indication : By means of red LED and LCD  
0.5...199.9 V + 200...1200 V AC  
0.5...199.9 V + 200...1200 V DC  
AC: 1% + 1 Digit bis 1kHz, DC: 0.5% + 1 Digit
- Frequency range : 0 - 10000 Hz
- Internal resistance : 311 kOhm
- Continuity : 0 - 1999 kOhm indicated with green LED, acoustic signal and LCD
- Switch on time : 30 s.
- Peak voltage withstand : >12 kV on voltage and continuity test
- Operating Temperature : -10° C to +50° C
- Overload Category : CAT IV 1000V
- Power Source : 9V Block, autom. battery. Automatic switch off after 30 seconds if no measurement
- Housing : Impact resistant ABS protection IP65
- Cables : H 07 RN-F 1 / 1m long



Description	Order- ref.	
Two Pole Voltage and Continuity Tester	013500	285

## Short Circuit Device for lower voltage overhead line

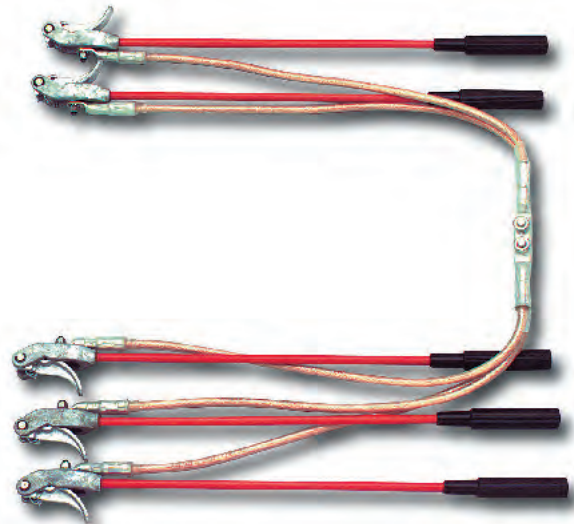
- With automatic clips - fixed to glass fibre reinforced Polyester rod, clamping region 3 - 18 mm Ø
- Consisting of: 4.5 or 6 clips MT-311, 1 length of copper short circuiting wire per clip, highly flexible, PVC insulated, cross section 25 mm<sup>2</sup> length of branch 600 mm, end is fitted with a sleeve; node insulated with tubing

For short circuiting low voltage overhead lines a six pole short circuit device is often necessary, especially for street lighting , etc

The use of screw type clamps can be strenuous and also time consuming and could lead to non observance of safety precautions. The short circuiting device SMT-300 with externally spring loaded and automatically closing clamps makes short circuiting effortless and safe.

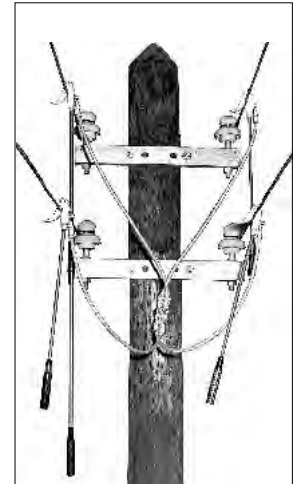
The basic element is the clip MT-311 with a fixed on polyester operation rod.

By using extension rods and fixing them to the polyester operation rods with clips, a greater range is obtained thus avoiding body contact with the cables.



## Operating Instructions:

- Fixing: The clip is fixed over the cable and the operating rod is gently pulled downwards. Contact is guaranteed irrespective of operator.
- Releasing: The clip is pushed upwards and with a slight turning motion sideways automatically released.



## Clip MT 311

- Clip is made of fibreglass reinforced Polyester
- For circular conductors 3-18 mm Ø, singular

## Extension Rod MT-333

- To be screwed on to the operating rod
- Fibreglass reinforced Polyester, 600 mm, for reaching greater heights.



Description	Order- ref.	No. of clamber	Cu-Anteil	⚖
Short Circuit Device SMT-300/4-25	062704	4	700	1900
Short Circuit Device SMT-300/5-25	062705	5	850	2400
Short Circuit Device SMT-300/6-25	062706	6	1000	2900
Extension Rod MT-333	062710	-	-	130
Spring terminal for circular conductor MT-311	062715	1	-	230

**Earthing and Short Circuit Device**  
for low voltage distribution and cable distribution cabinets

**Device with short circuiting handle**  
fitting to upper parts of NH-Fuse Size 1, 2 and 3

- 3 short circuiting handles made of Durethan material, colour red
- 1 earthing and short circuiting wire, highly flexible copper lead, transparent plastic sheath
- Branch length staggered, 250 mm, 500 mm, 750 mm
- Earth wire length 500 mm, star point compression connected in shrink transparent sleeving

optional:

- 1 earth terminal for busbar up to 12 mm (Order ref 062630)
- 1 earth terminal also available with flexible handle (Order ref 062645)

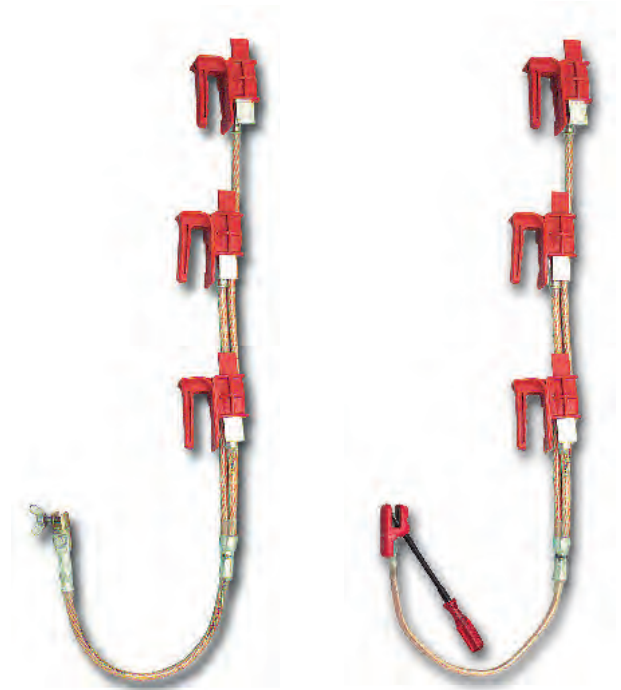
**Device with short circuit handgrip and short circuit cartridges**  
have been by KEMA in Arnhem with  
I dyn 25.8 kAs - I therm 10.2 kA-1s

According to the rated thermal load of earthing and short circuiting wires as per DIN VDE regulation 0105/Part 1, the maximum permissible short circuit current in A during a short circuiting period is as follows

Copper Strand Ø	10 sec	5 sec	2 sec	1 sec	<0.5 sec
25mm <sup>2</sup>	1600A	2200A	3500A	4900A	7000A
35mm <sup>2</sup>	2200A	3100A	4900A	6900A	10000A

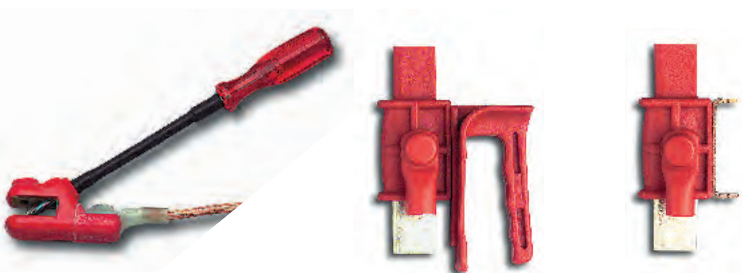
**Device with short circuiting cartridge**  
fitting to upper parts of NH-Fuse Size 1, 2 and 3

- 3 short circuiting cartridges made of Durethan material, dyed red
- As described above
- Operation carried out with I.v.h.b.c. fuse handle 659001



Order- ref. 062630

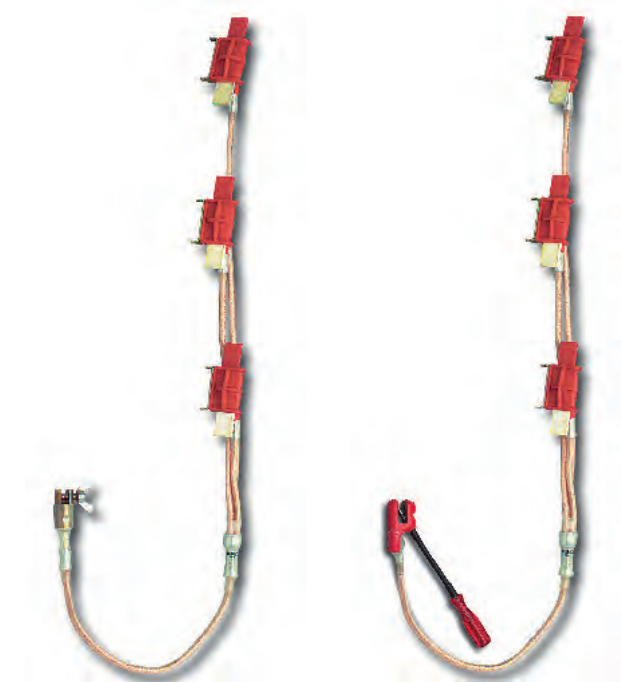
Order- ref. 062645



Order ref. 062629

Order ref. 062633

Order ref. 062638



Order ref. 062635

Order ref. 062648

Description	Order- ref.	Cross section in mm <sup>2</sup>	⚖️
Device with circuit current handle and Earth connection	062630	25	2050
Device with circuit current handle and Earth connection	062631	35	2300
Device with circuit current handle and movable screw handle	062645	25	2350
Device with circuit current handle and movable screw handle	062646	35	2600
Circuit current handle (single)	062633	-	320
Device with circuiting cartridge and Earth connection	062635	25	1850
Device with circuiting cartridge and Earth connection	062636	35	2100
Device with circuiting cartridge and movable screw handle	062648	25	2150
Device with circuiting cartridge and movable screw handle	062649	35	2400
Circuiting cartridge Size. 00, (single)	062666	-	200
Circuiting cartridge Size. 1-3, (single)	062638	-	250
Earth connection with movable screw handle (single)	062629	-	380

### Short Circuit Device for L.V. distribution boards

- The short circuiting cartridges are fitted with the help of a l.v.h.b.c. fuse handle (Order ref 659001) to the fuse bases.
- Subsequently the correct fit to the galvanic grip in the middle of the short circuiting cartridge has to be checked, fault earthing is therefore ruled out.
- Fitting of earth terminal and short circuiting wire to the cartridge is carried out with a detachable rod. (Order ref. 062670 )

Short Circuit Rating: 7 kA 0.5s

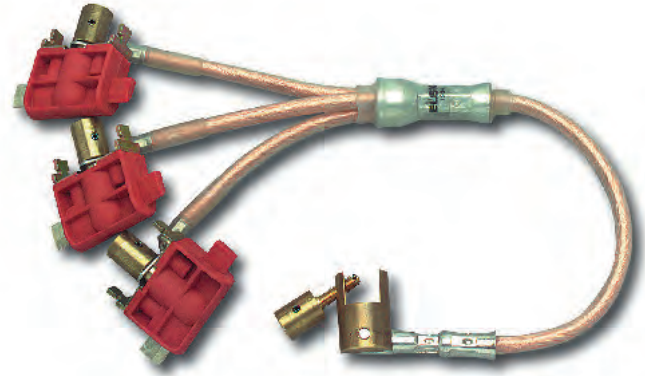
### Short Circuit Device for domestic switchboards with upper part NH-Fuse Size 00

- 3 short circuiting cartridges, size 00
- 1 length of earthing and short circuiting wire cross section 25 mm<sup>2</sup> - ESUY, branch length 3 x 200 mm, earth wire length 1 x 300 mm
- 1 earthing terminal for fixing to busbar up to 12 mm

### Short Circuit Device for L.V. distribution boards

#### with upper part NH-Fuse Size 00

- 3 short circuiting cartridges, size 00
- 1 length of earthing and short circuiting wire cross section 25 mm<sup>2</sup> - ESUY, branch length staggered 250/500/750 mm earth wire length 1 x 500 mm
- 1 earth terminal for fixing to busbar up to 12 mm



Order- ref. 062660



Order- ref. 062670

### Operating Rod with Ball catch

- For fixing earth terminal and connecting short circuiting wires

### Case for Earthing and Short Circuit Current Device (without picture)

- To accommodate earthing and short circuiting device and rod



Description	Order- ref.	Copper part	⚖️
Circuit Current Device for house connection cabinets	062660	300	1000
Circuit Current Device for lower voltage distribution (without picture)	062665	600	1300
Short Circuit Cartridge Size 00, (single)	062666	-	200
Operating Rod	062670	-	150
Case for Earthing Device (without picture)	062671	-	1700

**Short Circuit Device  
for Low Voltage Overhead Line**

**Single pole Earthing and Short Circuit Device  
10 mm<sup>2</sup> for screw in fuse link E 14**

- 1 earthing screw cap with conducting pin
- 1 earthing wire, cross section 10 mm<sup>2</sup> - transparent jacket, length 1000 mm
- 1 insulated earthing terminal with flexible handle

**16 mm<sup>2</sup> for screw in fuse links E 27 AND E 33**

- 1 earthing screw cap with conducting pin
- 1 earthing wire, cross section 16 mm<sup>2</sup> - ESUY, length 1000 mm
- 1 insulated earthing terminal with flexible handle
- design as illustrated



Order ref. 062680

**Two pole Earthing and Short Circuiting Device  
10 mm<sup>2</sup> for screw in fuse link E 14**

- 2 earthing screw caps with conducting pin
- 1 earthing and short circuit wire, cross section 10 mm<sup>2</sup> transparent jacket; branch length 2 x 300mm ,earth wire length 1 x 150 mm
- 1 insulated earthing terminal with flexible handle

**16 mm<sup>2</sup> for screw-in fuse links E 27 AND E 33**

- 2 earthing screw caps with conducting pin
- 1 earthing and short circuit wire, cross section 16 mm<sup>2</sup>- ESUY, branch length 2 x 300mm ,earth wire length 1 x 800 mm
- 1 insulated earthing terminal with flexible handle



Order ref. 062685

**Three pole Earthing and Short Circuiting Device  
(without picture)**

**16 mm<sup>2</sup> for screw-in fuse links E 27 AND E 33**

- 3 earthing screw caps with conducting pin
- 1 earthing wire, cross section 16 mm<sup>2</sup> - ESUY, length 1000 mm branch length 3 x 150 mm, earth wire length 1 x 150 mm
- Earthing point cable lug with M8 hole for fixing screw.

**Connection Device**

- For the connection of two low voltage systems
- Available with handle connected or cartridge
- Supplied with 1m long rubber coated connection lead
- Operation of device with cartridge to be carried out using Safety Fuse Withdrawal Glove (order ref 659001- S.77)
- Connection lead can also be supplied with a cross section of 95mm<sup>2</sup> or longer lengths.



Order ref. 062651  
with handle

single pole

Order ref. 062656  
with cartridge

Description	Order- ref.	Cross section	⚖
Single pole Earthing Device for E 14	062678	10 mm <sup>2</sup>	700
Two pole Earthing Device for E 14	062683	10 mm <sup>2</sup>	900
Single pole Earthing Device for E 27	062680	16 mm <sup>2</sup>	800
Two pole Earthing Device for E 27	062685	16 mm <sup>2</sup>	1100
Three pole Earthing Device for E 27	062690	16 mm <sup>2</sup>	600
Single pole Earthing Device for E 33	062682	16 mm <sup>2</sup>	900
Two pole Earthing Device for E 33	062687	16 mm <sup>2</sup>	1200
Three pole Earthing Device for E 33	062692	16 mm <sup>2</sup>	800
Connection Device with handle	062651	70 mm <sup>2</sup>	1750
Connection Device with handle	062652	95 mm <sup>2</sup>	2200
Connection Device with Cartridge	062656	70 mm <sup>2</sup>	1600

## Insulated D8mm spring loaded pin

Designed to connect up a variety of electrotechnical equipment (for example: SHUNT devices, current taps, connection cables, etc.)

### Technical Characteristics:

- This device will punch 8mm holes (such as D8mm insulated terminals, perforation clamps or terminal boards)
- Pin expansion up to an 8.5mm diameter
- Spring piston and resin cap protection of the contact zone
- Conductor (max. 35mm<sup>2</sup>) fastened inside the pin
- Phases identified by colored shells
- Suitable for use in cramped quarters
- 8 kA short circuit resistance for 0.2 seconds or 1.3 kA for 60 seconds
- Resistant to a load equal to 200A for 60 minutes or 250A for 15 minutes
- Rated voltage up to 600V AC/DC with 50-60Hz frequency
- Hand guard in compliance with EN CEI 60900 Standards



### Standards

- EN/IEC 60900:2004 (in accordance with)
- DIN EN 61010-031 (in accordance with)

Description	Order. ref.	INT-Id.	Dimensions	⚖️
Insulated D8mm pin black neutral	073450	2101 1	110x105x30mm	160
Insulated D8mm pin black L3	073456	2111 2	110x105x30mm	160
Insulated D8mm pin brown L2	073457	2111 3	110x105x30mm	160
Insulated D8mm pin grey L1	073458	2111 4	110x105x30mm	160
Insulated D8mm pin blue N	073452	2101 5	110x105x30mm	160

## Connection Cable with Insulated D8mm pin

Used to by pass currents on a single phase in live LV systems when performing a variety of tasks on these systems such as opening/closing bridges, replacing/ changing fuses or connecting/disconnecting aerial LV lines. All tasks can be done on live parts when this device is used.

### Technical Characteristics:

- Connection through insulated D8 pins
- The cable is connected through insulated D8 pins
- Double insulated cable
- 3000mm cable length
- Rated cable voltage up to U/U<sub>0</sub> 1.8/3kV
- Will carry a load equivalent to 200A for 60 minutes or 250A for 15 minutes
- Rated voltage up to 600V AC/DC with 50/60 Hz frequency
- 8 kA short-circuit resistance for 0.2 seconds or 1.3 kA for 60 seconds

**On demand:** Special length and cable diameter to 35mm<sup>2</sup>

### Standards

- EN/IEC 60900:2004 (dependence on)
- DIN EN61010-031 (dependence on)
- IEC 228 - class 5



Description	Order- ref.	INT-Id.	Colour / Marking	Cable diameter	⚖️
Connection cable	073461	21195	black / L3	25mm <sup>2</sup>	1 kg
Connection cable	073462	21192	blue / N	25mm <sup>2</sup>	1 kg
Connection cable	073463	21196	brown / L2	25mm <sup>2</sup>	1 kg
Connection cable	073464	21197	grey / L1	25mm <sup>2</sup>	1 kg

## Insulated Perforation Clamp

Designed as a connection clamp for various applications (e.g. Shunt connections, current supply taps, connections for measurement, connections of additional cables etc.)

### Technical Characteristics:

- Connection is made by perforating the insulation
- Size 10-95 for LV cables from 10 - 95mm<sup>2</sup> (Max O.D.16mm)
- Size 95-240 for LV cables up to approx 240 mm<sup>2</sup>
- **NB:** Thickness of the cable insulation must not exceed 3mm
- Not suitable for flexible cables (in compliance with IEC 228 - class 5/6)
- Spring loaded insulated cap to protect the perforation tip
- Coloured indication of phases by rotating knob
- Operating voltage up to 600V AC (50-60HZ) / DC. Cat III
- Insulation and grip surface in accordance with IEC 60900:2004
- Contact protection in accordance with DIN EN 61010-034
- Connection socket D4 mm to DIN EN 61010-034 rated for max 16A (see fig D4)
- Connection socket D8 mm rated for max 200A for 60 min. or 250A for 15 min and short circuit withstand 5kA for 0.2 sec., or 1.3kA for 60 sec. ( see fig. D8)



### Standards

- EN/IEC 60900:2004 (dependence on)
- DIN EN 61010-031 (dependence on)



coloured phase marking  
L1, L2, L3, N



### Set-Equipment:

- 4 insulated perforation clamp
- Nylon case with belt clip

Order ref. 073470



Socket D4 mm for current take off and electric measurements



Socket D8 mm with D8 intercable plug for shunts and current take off

Description	Order ref.	INT-Id.	Dimensions	⚖
Set 10-95	073470	21030	200x170x75mm	878
Insulated Perforation Clamp 10-95	073473	21033	175x35x42mm	184
Set 95-240	073480	21040	230x210x75mm	1308
Insulated Perforation Clamp 95-240	073483	21034	190x35x75mm	286

## Set of D4mm adapter for measurement kit

Used to connect up test or measurement instruments and equipment on hex or cylindrical heads and threaded bars or pins.

### Technical Characteristics: Insulated D4mm clamp:

- D4mm contact hole in compliance with EN CEI Standards 61010-2-31
- insulated terminals with 600V/Cat. III operating voltages

### Set-Equipment:

- 1 insulated grip
- 5 hex tightening inserts SW13, SW17, SW19
- 5 colour coded insulated terminals for the single phases
- Rigid case to contain 5 adapter, 1 insulated grip, 25 inserts, 1 insulated hex cap nut SW13, 15 hex cap nuts and 1 ample cavity for measurement conductors.

### Available Fittings:

(Inserts, cup nut adapter, cap nut... see Page 106)



### Standards

- DIN-EN 61010-031

Description	Order ref.	INT-Id.	Dimensions	⚖️
Adapter-Set	073190	22315	345x265x65mm	1800

## Available Fittings to collect current shunt and for measurement

### Insulated D4mm clamp for electrical measurement applications

- connector D4 mm to standard DIN EN 61010-031 for maximum current 16A
- Nominal voltage up to 600V AC / DC (50-60Hz)
- Over volt protection category III

### Standards

- DIN-EN 61010-031



073193



073191



073192



073194



073195

Description	Order ref.	INT-Id.	Colour	⚖️
Insulated clamp for measurement D4mm	073191	2130 001	black	62
Insulated clamp for measurement D4mm	073192	2130 002	green	64
Insulated clamp for measurement D4mm	073193	2130 003	red	63
Insulated clamp for measurement D4mm	073194	2131 004	blue	64
Insulated clamp for measurement D4mm	073195	2131 005	yellow/green	62

## Insulated Clamp D8mm

for shunt switches, current drawing-off devices, connection cables, etc.

- Connector D8mm
- Rated for a load equal to 200A for 60 minutes or 250A for 15 minutes
- 8kA short-circuit resistance for 0.2 seconds or 1.3 kA for 60 seconds
- Rated voltage up to 600V AC/DC with 50-60Hz frequency



Description	Order ref.	INT-Id.	Dimensions	
Insulated Clamp D8mm	073321	2202 1	45x39	60

## Insulated Grip

- To install the insulated clamp D4mm/D8mm
- According to EN/IEC 60900



Description	Order ref.	INT-Id.	Dimensions	
Insulated Grip	073196	2201 1	180x55	164

## Inserts for hexagon socket screws with insulated shank

- For use only in combination with insulated terminals D4/D8
- The internal expansion mechanism guarantees perfect connections to the socket head screw
- Rated for a load equal to 200A for 60 minutes or 250A for 15 minutes
- 7kA short circuit resistance for 0.2 seconds
- Shank insulation in plastic material as protection against contact



Description	Order ref.	INT-Id.	Size	Dimensions	
Insert I-S6L	073260	2208 060	SW 6	56x20	34
Insert I-S5L	073250	2208 050	SW 5	56x20	30

## Tightening Insert for Allen Screw

- For use only in combination with insulated terminals D4/D8
- The internal expansion mechanism guarantees perfect connections to the socket head screw
- Rated for a load equal to 200A for 60 minutes or 250A for 15 minutes
- 8kA short circuit resistance for 0.2 seconds or 1.3 kA for 60 seconds



Description	Order ref.	INT-Id.	Size	Dimensions	
Insert I-S8	073280	2208 080	SW 8	20x35mm	24

## Hex tightening insert for insulated terminals

### SW8-SW22

- For use only in combination with insulated terminals D4/D8
- The internal expansion mechanism guarantees perfect connections to the socket head screw
- Rated for a load equal to 200A for 60 minutes or 250A for 15 minutes
- 8kA short circuit resistance for 0.2 seconds or 1.3 kA for 60 seconds



Description	Order ref.	INT-Id.	Size	⚖️
Insert SW8	073208	2203 008	SW 8	16
Insert SW10	073210	2203 010	SW 10	16
Insert SW11	073211	2203 011	SW 11	16
Insert SW13	073213	2203 013	SW 13	16
Insert SW14	073214	2203 014	SW 14	12
Insert SW16	073216	2203 016	SW 16	14
Insert SW17	073217	2203 017	SW 17	14
Insert SW18	073218	2203 018	SW 18	16
Insert SW19	073219	2203 019	SW 19	28
Insert SW22	073222	2203 022	SW 22	30

## Standard D6 tightening insert

- For use only in combination with insulated terminals D4/D8
- The internal expansion mechanism guarantees perfect connections to the socket head screw
- Rated for a load equal to 200A for 60 minutes or 250A for 15 minutes
- 8kA short-circuit resistance for 0.2 seconds or 1.3 kA for 60 seconds



Description	Order ref.	INT-Id.	Dimensions	⚖️
Insert D6	073236	2203 106	21x19mm	18

## Hex Cap Nut SW13

- Serves to allow a contact on threaded bolts M8, M10, M12 via the SW 13 allen wrench.
- To allow correct assembly and disassembly, use an adapter for cap nuts and an insulated handle
- Rated for a load equal to 200A for 60 minutes or 250A for 15 minutes
- 8kA short-circuit resistance for 0.2 seconds or 1.3 kA for 60 seconds



Description	Order ref.	INT-Id.	Internal Thread	⚖️
Hex Cap Nut SW 13-M8	073238	2206 008	M8	10
Hex Cap Nut SW 13-M10	073240	2206 010	M10	8
Hex Cap Nut SW 13-M12	073242	2206 012	M12	4

## Insulated Hex Cap Nut SW13

- Assembly performed by the 13mm tightening insert and the insulated grip (Order-ref. 073196)
- To fasten the SW 13 cap nut on threaded rods and bolts
- Electrocutation protection through plastic bushing



Description	Order ref.	INT-Id.	Dimensions	⚖️
Hex Cap Nut	073245	2205 1	-	38

## Sets - Adapter for electrotechnical Equipment

Adapter for current shunts and electrical measurements (e.g. shunts, current take off-devices, connection cables, measuring instruments, etc), from hexagonal head bolts and socket head screws, studs, bolts and cylindrical plugs.

### Adapter Set D8mm for 1 pole shunt

#### Set Equipment:

- 1 insulated grip
- 2 insulated D8mm clamps
- 2 hex tightening inserts for external hexagon SW13, SW17, SW19
- Rigid case to contain max. 4 adapter, 1 insulated grip and max. 20 inserts

**Available Accessories (inserts) see Page 104 + 106**



Picture conforms to Order ref. 073184

### Adapter Set for 2 poles shunt

#### Set Equipment:

- 1 insulated grip
- 4 insulated D8mm clamps
- 4 hex tightening inserts for external hexagon SW13, SW17, SW19
- Rigid case to contain max. 4 adapter, 1 insulated grip and max. 20 inserts

**Available Accessories (inserts) see Page 104 + 106**

Description	Order- ref..	INT-Id.	Dimensions	⚖️
Adapter Set 1 pole	073182	2223 2	317x111x45	770
Adapter Set 2 pole	073184	2223 4	317x111x45	890
Case for Adapter-Set 1/2pole empty	073490	AB 22204	317x111x45	210

### Adapter Set for 3 poles shunt

#### Set Equipment:

- 1 insulated grip
- 6 insulated D8mm clamps
- 6 hex tightening inserts for external hexagon SW13, SW17, SW19
- Rigid case to contain max. 8 adapter, 1 insulated grip and max. 40 inserts

**Available Accessories (inserts) see Page 104 + 106**

### Adapter Set for 4 poles shunts

#### Set Equipment:

- 1 insulated grip
- 8 insulated D8mm clamps
- 8 hex tightening inserts for external hexagon SW13, SW17, SW19
- Rigid case to contain max. 8 adapter, 1 insulated grip and max. 40 inserts

**Available Accessories (inserts) see Page 104 + 106**



Picture conforms to Order ref. 073188

Description	Order- ref.	INT-Id.	Dimensions	⚖️
Adapter Set 3 pole	073186	2223 6	275x221x69	1380
Adapter Set 4 pole	073188	2223 8	275x221x69	1540
Case for Adapter Set 3/4pole empty	073492	AB 22208	275x221x69	390

## Current Collector Device 220V

Designed for two pole tapping of currents up to 16A to power electrical equipment.

### Technical Characteristics:

- Power sockets IP44, 2x16A - 230V
- Rubber cover insulation IP44
- 2 connection cables 16mm<sup>2</sup>, length 1500 mm
- Connection cable with double insulation; nominal voltage U/U<sub>0</sub> 1.8/3kV
- Overload switch 16A, characteristic C, short circuit current 25kA
- Differential switch 0,03A
- 0.03A graduated sensitivity ground fault switch
- Nominal voltage 230 AC/DC (50-60Hz)
- Short-circuit protection 8kA for 0.2 seconds or 1.3 kA for 60 seconds


### Set-Equipment:

- Current collector device
- Plastic case to contain device housing



### Standards of housing:

- EN 61009
- EN 60493/4
- IEC 309

Description	Order ref.	INT-Id.	Connection	
Current Collector Device	073412	2320 212	2 x A	4.8 kg
Current Collector Device	073413	2320 215	2 x B	4.8 kg

### Selectable connecting piece



A) Connection with Pin



B) Connection with wire and sleeve

## Current Collector Device 400V/16A A. C.

Four pole device for current take off up to 16A for supply of electro-technical device.

### Technical Characteristics:

- Five pole CEE three wire sockets (3pol + N + PE) IP44, 2 x 16A - 400V
- Rubber cover insulation IP44
- Connection cables 16mm<sup>2</sup>, length 1500 mm
- Connection cable with double insulation; nominal voltage U/U<sub>o</sub> 1.8/3kV
- Overload switch 16A, characteristic C, short circuit current 25kA
- 0.03A graduated sensitivity ground fault switch
- Nominal 380/400V AC / DC (50-60Hz)
- Short-circuit protection 8kA for 0.2 seconds or 1.3 kA for 60 seconds

### Set-Equipment:

- Current collector device
- Plastic case to contain device housing



### Standards of housing:

- EN 61009
- EN 60493/4
- IEC 309

Description	Order ref.	INT-Id.	Dimensions	Connection	
Current Collector Device	073421	2320 221	500x380x190	3 x B + 1 x C	8 kg

### Selectable connecting piece



A) Connection with Pin



B) Connection with wire and sleeve

## SHUNT / Single pole Shunt device

Designed to by-pass live connections under load in Low Voltage systems (e.g. to replace fuses, connect/disconnect electric connections etc. )

### Technical Characteristics:

- Red LED to signal polarity inversion
- Connection by insulated plug D8 mm
- Case protection grade IP44
- Connection cable 16mm<sup>2</sup>, length 1500mm
- Connection cable with double insulation; nominal tension U/U0 1.8/3kV
- With fixed overload cut-out level
- Nominal automatic switch current 160A; short circuit current 25kA,
- Current load 200A for 30 min. or 250A for 15 min.
- Nominal tension max. 600V AC / DC (50-60Hz)
- Short circuit protection 8kA for 0.2 sec. or 1.3kA for 60 sec.

### Set-Equipment:

- Single-pole Shunt device
- 1 plastic case to contain Shunt device

Assembly option accessories-for insulated terminal D8 + dies or insulation perforation terminal: see Page 102 + 103



Description	Order ref.	INT-Id.	Dimensions	⚖️
Shunt single-pole	073430	2120 1160	430x310x120	5.1 kg

On demand: Special construction available

## SHUNT- / Multi-pole Shunt device

For opening and closing circuit breaker bridges in lines under load in Low Voltage systems (e.g. to replace fuses, connect/disconnect electric connections etc. )

### Technical Characteristics:

- Electronic reverse polarity protection for correct phase connection
- Digital counter for determination number of switching actions
- Connection by insulated plug D8 mm
- Case protection grade IP44
- Connection cable 25mm<sup>2</sup>, length 1500mm
- Connection cable with double insulation; nominal tension U/U0 1.8/3kV
- Nominal automatic switch current 250A; short circuit current 50kA,
- With adjustable thermal response threshold
- Current load 160A for 60 min.
- Nominal tension max. 600V AC / DC (50-60Hz)
- Short circuit protection 8kA for 0.2 sec. or 1.3kA for 60 sec.

### Set-Equipment:

- Multi-pole Shunt device with electronic response threshold
- 1 plastic case to contain Shunt device

Assembly option accessories-for insulated terminal D8 + dies or insulation perforation terminal: see Page 102 + 103



Example of application:  
Current shunt at a low-voltage distribution box

Description	Order ref.	INT-Id.	Dimensions	⚖️
Shunt three pole	073434	2127 3250	430x310x200mm	13 kg

## Grounding and short circuit devices

Designed for grounding and short circuiting LV cables.

### Technical Characteristics:

- Short circuit device, section 16mm<sup>2</sup>, 4 insulated D8 mm pins, 4 lengths 300/375/300/375mm and insulated junction with connection possibility for grounding cable by mean of insulated pin.
- Grounding cable, section 16mm<sup>2</sup>, cable length 2000mm, 1 insulated D8 mm pin and 1 screw clamp adjusting up to 20mm
- Short circuit strength, 8kA for 0.2 sec.

### Set-Equipment:

- Short circuit device
- Grounding cable
- Plastic case to contain device

### Standards :

- EN 61230
- EN 10020
- IEC 228 - class 6
- IEC 1138



Short-circuit device – 073101



Grounding cable – 073102

Description	Order ref.	INT-Id.	Dimensions	⚖️
Grounding and short-circuit device	073100	2420 0	340x170x160mm	1750
Short-circuit device	073101	2420 1	70cm cable length	500
Grounding cable	073102	2420 2	200cm cable length	800

## Grounding and short circuit devices

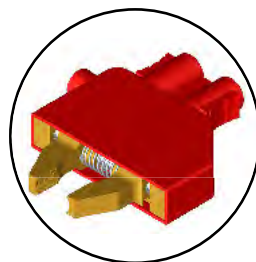
Designed for grounding and short circuiting of street lightings. The device is easy to handle, because you have no rigid star point. You can attach every circuit clamp separate with the star point.

### Technical Characteristics:

- Short circuit wire cross section 16mm<sup>2</sup>
- Cable length 3700 mm
- Jaw opening 6 up to 17 mm
- Toothed gripping jaws for optimum grip
- Short circuit strength, 4.5 kA for 0.5 sec.

### Set-Equipment:

- 10 Universal clamps with cable
- 2 Star points
- 1 Screwdriver
- Plastic case to contain device



Order ref. 073113



Order ref. 073111

Description	Order ref.	INT-Id.	Dimensions	⚖️
Grounding and short-circuit device Set	073110	2520 0	390x320x90mm	2500
Short-circuit device	073111	2510 1	37cm cable length	200
Star Point	073113	2520 2	80x60x20mm	100

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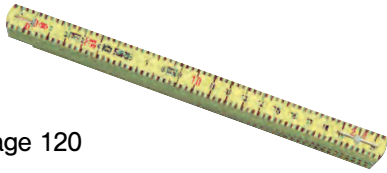
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### Devices for Distributin Lines and Cable Installation

- Insulating Ladders, Rope Lifting Devices
- Pulleys, Rope Tension Clamp
- Fastener Harness, Catching Harness, Safety Chain, Climbing Iron
- Spirit Level, Drills, Hammer, Brush, Wedge
- Work and Emergency Power Light, Explosion proof Light
- Tents
- Soldering Tools



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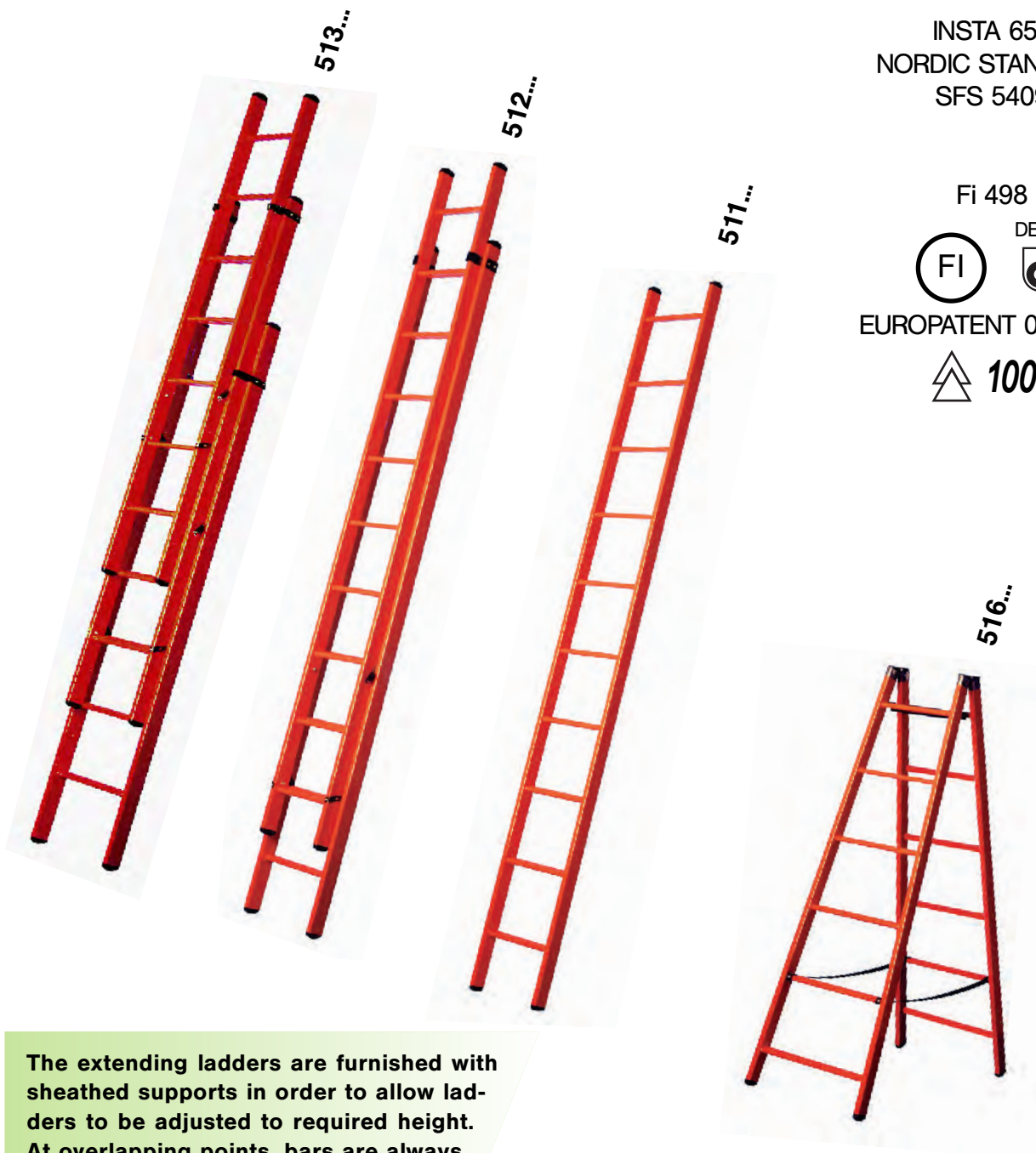
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### Insulating Ladders

Ladders are made of Polyester and are re-enforced with glass-fibre and therefore weather-proof and resistant to various chemicals. All bars are at a 16 degree angle and in horizontal position. Bars are 45 mm, the frames are 24 x 62 mm thick. The use of the ladders is easy and safe. They can also be used in very cold conditions as glass-fibre re-enforced Polyester causes less heat conductivity. Five standard designs are immediately available. Special designs can be manufactured. All ladder types are VDE approved. Ladders are labelled according to IEC 900.



INSTA 650  
NORDIC STANDARD  
SFS 5409

Fi 498



EUROPATENT 0154850



The extending ladders are furnished with sheathed supports in order to allow ladders to be adjusted to required height. At overlapping points, bars are always parallel thus providing a wide stand.

## Insulating Ladder

- practical accessories for ladder
- also for upgrading

Picture: Order- ref. 517000  
+ Order- ref. 517030



Ground Spike  
Order ref. 517010



Wall hooks  
Order ref. 517020



Supporting Set  
Order ref. 517030



Support Device  
Order ref. 517000

Order ref.	Description	
517000	Device for putting up against pylon or wall (without Supporting-Set 517030)	3.0
517010	Ground Spike	0.6
517020	Wall hooks for all insulated ladders, complete with fixing pieces (screws etc.)	0.8
517030	Supporting Set	0.8

## Three- part extension ladder

Order ref.	Length	Length per Element	Bottom Width	Top Width	Bars	
513070	7.2	3.1	0.49	0.37	3 x 10	26.5
513090	9.1	3.7	0.49	0.37	3 x 12	34.2

## Two part extension ladder

Order ref.	Length	Length per Element	Bottom Width	Top Width	Bars	
512060	5.8	3.4	0.43	0.37	2 x 11	17.6
512070	7.0	4.0	0.43	0.37	2 x 13	21.6
512080	8.2	4.6	0.43	0.37	2 x 15	26.5

## Single part extension ladder

Order ref.	Length	Width	Bars	
511030	3.1	0.4	10	7.6
511040	4.0	0.4	13	9.8

## Insulating double-sided Step Ladder

Order ref.	Length	Height Usage	Width	Width Usage	Bars	
516020	1.8	1.7	0.54	1.1	6 + 6	10.3
516025	2.4	2.3	0.59	1.4	8 + 8	13.6

Measurements in Metres

## Holding Harness with back support EN 358

- The Holding Harness in accordance with EN 358 may only be used if there is no danger of a fall.
- Together with the holding rope it gives the back strong support.
- By attaching belt bags (for example Order- ref. 743000 - p.108) tools can be carried safely.
- two holding eyellets on the side with 85 mm width eyellets EN 358
- fastener with light metal double frame and foam back support

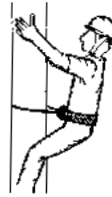


Order ref. 674020



## Adjustable Holding Rope 12 mm Ø

- Fitting: adjustable Fastener Rope 12 mm Ø, 2 m effective length with two spring hooks.
- the length is adjusted by using a buckle



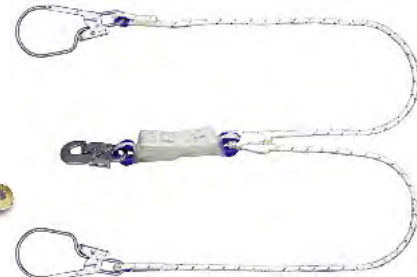
Order ref. 891505

## Adjustable Holding Rope 16 mm Ø with Rope Shortener

- Fitting: adjustable Fastener Rope 16 mm Ø, 2 m effective length, with single side spring hook.
- the shortening takes place with the rope-shortener with eyelet and aluminium - carbine 115 mm



Order ref. 891504

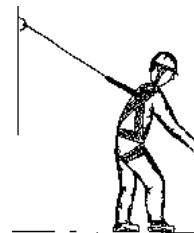


Order ref. 680195

Description	Order ref.	Belt length	Chest /Body measurement	⚖️
Holding Harness "Euro" with back support	674020	S - XL	800-1200	1400
Adjustable holding rope 12 mm Ø	891505			500
Adjustable holding rope 16 mm Ø with Rope Shorter	891504			1200
Back Supp. for Hold. Harness 170 mm width, padded	676011			1000
Fastener Rope 2 m BFD Y	680195			
Fastener Rope 2 m BFD V	680196			

## Fall Arrest Harness to EN 358 and 361

- The ARG suspension harness is a universal standard harness which can be used in many applications.
- A 'D' eyelet on the backside provides suspension support in accordance with EN 361
- Two side mounted 'D' rings prevent sideways movement in accordance with EN 358
- The belt support is 45mm wide and has a double frame locking device



Order ref. 675001

## Combination Fall Arrest Harness

- The combination suspension harness provides back support together with a fall arrest harness
- In cases where the worker must be suspended for a long period, the substantial back support, makes the wearing of this safety harness far more comfortable.
- A D eyelet on the backside provides suspension support in accordance EN 361
- Two 85mm side mounted D rings prevent sideways movement in accordance with EN 358
- The belt support is 45 mm wide and has a double frame locking device
- The waist support is 85 mm wide and has a light alloy frame and roller bar buckle
- Foam padded back support



Order ref. 678060



Order ref. 678063



Order ref. 675130

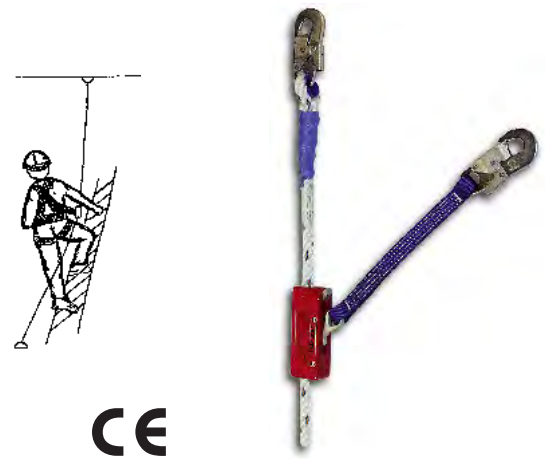


Description	Order ref.	Belt length	Chest/Body measurement	⚖️
Fall arrest Harness (without back support)	675001	1500	100 - 1100	1500
Back support 170 mm width, padded	676001		800 - 900	2300
Fall arrest Harness with padded back support	675130	1300	800 - 900	2300
Fall arrest Harness with padded back support	675140	1400	900 - 1000	2300
Fall arrest Harness with padded back support	675150	1500	1000 - 1100	2300
Fall arrest Harness with padded back support	675160	1600	1100 - 1200	2300
Fall arrest Harness with padded back support	675170	1700	1200 - 1300	2400
Fall arrest Harness with padded back support	675180	1800	1300 - 1400	2400
Fall arrest harness G 60 Evolution	678060		UNISIZE	2000
Fall arrest Harness G 80 Evolution	678063		UNISIZE	1800

## Trailing Support Line to EN 353-2

### EKN 1

- The device **EKN 1**, with integrated friction fall preventer and fastener, is equipped with a 16 mm safety rope .
- In direction you are proceeding the device runs easily and safely on the rope - in opposite direction the lock can only be disengaged by pressing the button.
- The delivery contains the device with the ordered rope length. It is not be subsequently modified !
- Device made of aluminium with integrated fall shock absorber
- Fastener - webbing 0.5 m
- Double-sided automatic spring hook



CE

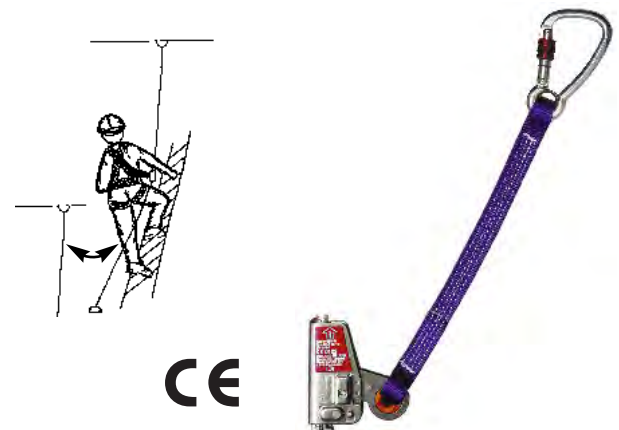
Description	Rope Ø	Order ref.	Rope Length	⚖️
Following Catching Device EKN 1	16 mm	674102	2 m	1500
Following Catching Device EKN 1	16 mm	674105	5 m	2100
Following Catching Device EKN 1	16 mm	674110	10 m	2800
Following Catching Device EKN 1	16 mm	674115	15 m	3500
Following Catching Device EKN 1	16 mm	674120	20 m	4000
Following Catching Device EKN 1	16 mm	674125	25 m	5200

## Trailing Support Line to EN 353-2

### SKA, turn upwards

- The device **SKA**, with integrated fastener, is suitable for coated core ropes of 12 mm Ø .
- You can open the device to take it off the rope and change it. The device runs easily on inside rollers. It is permanently jammed and can be moved by pressing the rope clamping lever. In case of an accident the device is clamped at the rope which means that the energy is dissipated equally.
- Device is made of stainless steel
- Fastener harness strap with snap hook EN 362 **NB:** coated core rope 12 mm Ø must be ordered separately with required length.

- ▶ Together with the support harness EN 361 (p. 116) the device can be used as a fall arrest device .



CE

Description	for Rope Ø	Order- ref.	⚖️
Catching Device SKA	12 mm	674200	900

## Safety Rope

### Coated Core Rope for use with fall arrest device

- The Safety Rope for the SKA equipped with a single side snap hook and a hand loop - in 5 m steps available.
- also available with snap hook to both ends



CE

Description	Rope Ø	Order ref.	Rope Length	⚖️
Safety Rope (core spun)	12 mm	679205	5 m	900
Safety Rope (core spun)	12 mm	679210	10 m	1300
Safety Rope (core spun)	12 mm	679215	15 m	1700
Safety Rope (core spun)	12 mm	679220	20 m	2100
Safety Rope (core spun)	12 mm	679225	25 m	2600

## Climbing Iron for Wooden Poles DIN 48345

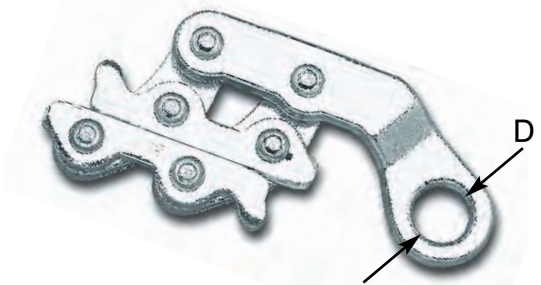
- Hook and stand 100% crack tested according to DIN 54130 (failing load approx. 7500 N)
- High quality leather straps with wide back cap
- Galvanized
- Material: DIN 17200 (hook and stand)
- Drop-forged



Description	Order ref.	Wooden Pole Ø	Spike Width	Load Capacity kg/pc.	⚖️
Climbing Iron with 3 Spikes	671020	100 - 180	200	200	3900
Climbing Iron with 2 Spikes	671025	150 - 240	260	200	4100
Climbing Iron with 3 Spikes	671026	150 - 240	260	200	4200
Climbing Iron with 3 Spikes	671032	200 - 300	320	200	4300
Climbing Iron with 3 Spikes	671036	220 - 330	350	200	4500

## Come Along Clamp

- Is a 'must' for every overhead line fitter
- Simple to handle due to an easy clamp jaw grip
- Automatic fastening on rope due to a spring reaction
- No slipping of the rope, even at maximum traction
- Galvanized
- With long clamp jaws, parallel tension, made of high quality structural steel
- Clamp jaws for copper and steel ropes are hardened and burnished



Description	Order ref.	Rope Ø in mm	Rope in mm <sup>2</sup>	Eye-Size D	Load-capacity	Failing-load	⚖️
Rope Tension Clamp for Alu-/Steel Rope	586035	5,4 - 8,5	25 - 35	22	1000 kg	2000 kg	800
Rope Tension Clamp for Alu-/Steel Rope	586070	8,0 - 12,0	50 - 70	27	1700 kg	3400 kg	1150
Rope Tension Clamp for Alu-/Steel Rope	586095	12,0 - 16,0	95 - 120	25 x 38	3000 kg	6000 kg	1830
Rope Tension Clamp for Alu-/Steel Rope	586150	15,0 - 20,0	150 - 185	30 x 40	3500 kg	7000 kg	3700
Rope Tension Clamp for Alu-/Steel Rope	586240	20,0 - 24,5	240 - 300	30 x 40	3500 kg	7000 kg	3600
Rope Tension Clamp for Cu-/Steel Rope	587000	1,0 - 5,0	1 - 16	20	500 kg	1000 kg	270
Rope Tension Clamp for Cu-/Steel Rope	587001	3,0 - 9,0	6 - 35	22	1000 kg	2000 kg	850
Rope Tension Clamp for Cu-/Steel Rope	587002	4,0 - 12,0	16 - 70	27	1700 kg	3400 kg	1200
Rope Tension Clamp for Cu-/Steel Rope	587003	6,0 - 18,0	50 - 150	25 x 38	3000 kg	6000 kg	1850
Rope Tension Clamp for Cu-/Steel Rope	587004	10,0 - 28,0	90 - 400	30 x 40	3500 kg	7000 kg	3800
Rope Tension Clamp for Cu-/Steel Rope	587005	20,0 - 40,0	240 - 800	30 x 40	4000 kg	8000 kg	6200

## Come Along Clamp for insulated overhead L.V Cable single and multicore

- For insulated overhead line and fibre cable according to VDE 0274
- Galvanized
- With large clamp jaw
- Automatic fastening on rope due to inserted spring



Description	Order-ref.	Rope Ø in mm	Rope in mm <sup>2</sup>	Eye-Size D	Load-capacity	Failing-load	⚖️
Come Along Clamp for Alu-/Steel Rope	586000	14 - 34	2 x 35-70 4 x 35-70	30 x 45	1200 kg	3000 kg	2200
°Come Along Clamp for Alu-/Steel Rope	586001	8 - 25	2 x 16-50 4 x 16-35	27 x 40	500 kg	1250 kg	900

## Cable Winch / Block and Tackle

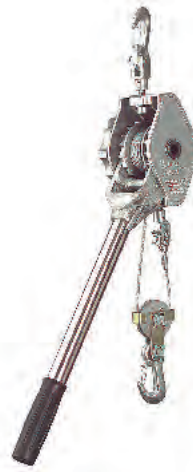
The recently developed aluminium tackle block is a handy lifting device for lifting all types of loads and can be used in every position. Lifting and lowering of load, tension and relaxing tension in horizontal use is done by a hand lever. The lever can be set to 'Up' or 'Down' position.

### 'Pullmaster' model

- Made of cast aluminium, therefore lightweight
- For use in all weathers
- Hoisting capacity double rope 2.0 m
- Hoisting capacity single rope 4.0 m
- Height 470 mm
- Hoisting capacity with 120° leverage 52 mm

### US model

- As above, but without load pressure brake
- Safety lever for overload
- Hoisting capacity double rope 1.5 m
- Hoisting capacity single rope 3.0 m



Type Pullmaster



US-Type

Description	Order ref.	max. Traction (kg)	⚖️
Tackle-Block 'Pullmaster' model	565000	350 (175)	3800
Tackle-Block 'US' model	565005	1000 (500)	4500

## Stringing Blocks

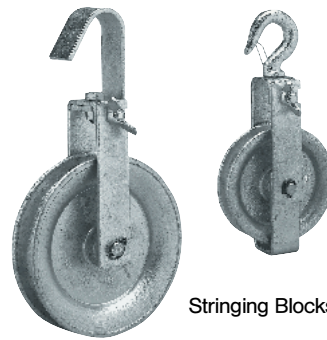
- Made of aluminium with brass box, galvanized
- Gearing pin and housing made of steel
- Side opening with wing nut
- With fixed hook (Order ref. 574020)
- With rotary safety hook (Order ref. 5750xx)

### Pulleys (without Rope)

- With rotary safety hook, forged
- Galvanized, solid sheet steel with 3 rollers in contiguity, rollers made of brass (plastic possible)
- One pulley piston each with and without rope loop

### Rope for Pulleys (no illustration)

- Hemp rope for a good grip
- Polypropylene rope for strength and life span
- Wire in available in nearly all length



Stringing Blocks



Pulley

Description	Order-ref.	Roller Ø	Load Capacity	Opening Roller	Rope Ø	⚖️
Stringing Block with rigid suspension hook	574020	200	200	30	29	2200
Stringing Block with safety swivel hook	575011	115	225	17	16	1150
Stringing Block with safety swivel hook	575011	115	225	17	16	1150
Stringing Block with safety swivel hook	575011	115	225	17	16	1150

Description	Order-ref.	Roller Ø	Load Capacity	Failing Load	Roller Width	Opening Roller	Rope Ø	⚖️
Pulley without Rope	578040	40	150	mind. 600	9	12	6	850
Pulley without Rope	578050	50	200	mind. 800	12	15	8	1500
Pulley without Rope	578060	60	250	mind. 1000	12	15	10	3200
Pulley without Rope	578070	70	300	mind. 1200	16	18	12	3300
Pulley without Rope	578080	80	350	mind. 1400	16	18	12	8500

Description	Order-ref.	Rope Ø	Length	Failing Load	⚖️
Hemp Rope for Pulleys	578806	6	20	400	800
Hemp Rope for Pulleys	578808	8	20	500	1000
Hemp Rope for Pulleys	578810	10	20	800	1600
Hemp Rope for Pulleys	578812	12	20	1200	2200
Hemp Rope for Pulleys	578809	8	20	1150	740
Hemp Rope for Pulleys	578811	10	20	1780	1180
Hemp Rope for Pulleys	578813	12	20	1740	2400

## Manhole Cover lifting tool

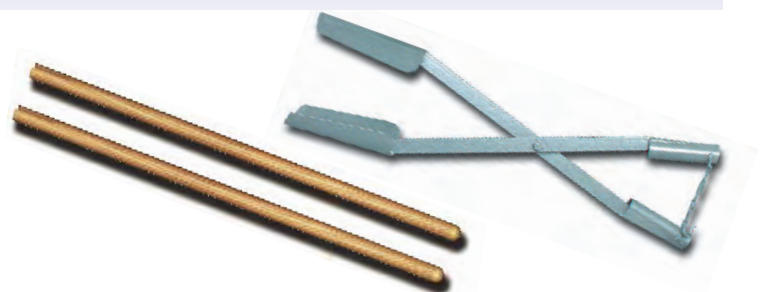
- Screw tool with support for lifting and transporting manhole covers



Description	Order ref.	Length	Width	Height	
Pliers for lifting manhole covers	297000	570	400	140	6200

## Hand Digger

- Suitable for making holes for posts and poles
- Shovels are made of good quality steel provided with a cord
- Handle made of flat steel 30 x 10 mm
- Socket with chain and good quality ash wood handle



Description	Order ref.	Length	Shovel Height	Shovel Width top	Shovel Width bottom	Hole Size	
Hand Digger Size 1	297010	1500	200	180	120	90 to 200	5000
Hand Digger Size 2	297020	1800	220	219	160	100 to 260	7000

## Adze with Handle

- Varnished blue
- Polished blade
- Tailed handle, ash wood white



Description	Order ref.	Handle Length	Blade Width	
Adze with Handle	441000	800	70	1800
Single Handle for adze	441010	800		400

## Stone Chisel

- For treating stone, concrete and brickwork
- Flat, oval shape with hand guard (no illustration.)
- Made of special Chrome-Vanadium steel
- Varnished black
- With yellow coloured, polished ends



Description	Order ref.	Length	Oval	Chisel Point Width	
Stone Chisel 250 mm with Hand Guard	320725	250	20 x 12	26	440
Stone Chisel 250 mm with Hand Guard	320730	300	3 x 13	9	660
Stone Chisel 250 mm with Hand Guard	320740	400	23 x 13	29	910
Stone Chisel 250 mm with Hand Guard	320750	500	26 x 13	32	1350

## Wire Winder

- Made of channel iron
- Varnished



Description	Order ref.	Measurements	Load	
Wire Winder	595001	500 x 300 x 40 mm	150	18kg

## Measuring Rule

- Made of fibreglass re-enforced polyamide
- High measuring accuracy duplex division with decimal numbering
- Self-greasing hinges can be locked at right angle
- 525005 is completely made of plastic / 525001 and 525003 with reinforced hinge by metall stud



Description	Order ref.	Length	Width	
Measuring Rule, all plastic	525005	1 m	16 mm	80
Measuring Rule, Plastic	525001	1 m	16 mm	80
Measuring Rule, Plastic	525003	2 m	16 mm	140

## Wooden Spirit Level

- Oiled
- Made of selected quality
- Artificially dried

## Aluminium Spirit Level

- Made of aluminium, anodized
- Surface natural colour
- Accuracy at normal position min.  $0.057^\circ = 1.0 \text{ mm/m}$



Description	Order ref.	Length	
Teak-Wood Spirit Level	526050	500	550
Aluminium Spirit Level	527105	500	500

## Measuring Rule

- Corrosion-protected sheet steel casing with plastic coating
- Nickel-plated metal handle with spring return
- Fittings made of stainless steel



Description	Order ref.	Length	Width	
Fibreglass Tape Measure (capsuled)	531020	20 m	13 mm	540
Replacement Tape, fibreglass	531820	20 m		170

## Fibreglass Tape Measure in aluminium

- Frame made of anodized aluminium
- Handle can be fixed on either side
- Two ball bearings ensure easy unrolling and rolling up
- The angled handle has non-slip rubber knobs
- Tape of high quality plastic - replaceable
- Stationary position of tape starter ring



Description	Order ref.	Length	Width	
Fibreglass Tape Measure on aluminium	534050	50 m	13 mm	930
Replacement Tape, fibreglass	531850	50 m		440

## EnerGrip Set

For fast, comfortable and labour saving move of all cable retraction aids (flat steel, spiral wire, plastic- and fibreglass wire) with diameter  $\varnothing$  3–12mm



Description	Order ref.	INT-Id.	Dimensions	
EnerGrip Set (4 piece)	530605	AS8902	95x280mm	approx. 230

## Irwin Spiral Drill

- Usage: for drilling into softwood with brace
- With square plunger, threaded point, 2 main cutters, 2 pre-cutters, polished spirals

## Spiral Rod Drill

- Usage: hand drill for softwood
- With threaded tip, 2 main cutters, 2 pre-cutters
- Polished spiral with ear



Description	Order ref.	Ø	Length	
Irwin-Spiral Drill	379006	6	185	50
Irwin-Spiral Drill	379018	18	220	117
Irwin-Spiral Drill	379020	20	225	130
Irwin-Spiral Drill	379022	22	230	135

Description	Order ref.	Ø	Length	
Spiral Rod Drill	382016	16	600	425
Spiral Rod Drill	382018	18	600	610
Spiral Rod Drill	382020	20	600	615
Spiral Rod Drill	382022	22	600	652

► Other size on demand.

## Precision Sheet Metal Drill

- Universal tool especially designed for thin sheet metal e.g., in switchboard manufacturing, vehicle sheet body work and for general industrial sheet metal work.
- The special drilling tools create a deep counter sunk hole, which means no counter sinking or special clearance relief's. The tool can also be used on non-ferrous metals as well as soft and hard plastics.
- The wide range of boring tools allows a complete smooth range of hole sizes in the very thinnest materials without deformation up to a maximum material thickness of 10mm.
- Twin cut geometry axial and radial provides smooth surface on inside of sheet
- The laser scaled markings on the drill allow you to read off the diameter of the hole as it is being made



Order- ref.. 383050

Order ref. 383030



Description	Order ref.	Hole range	Shaft Ø	— mm —	⚖
Sheet Metal Drill HSS	383003	3 - 14 mm Ø	6.0 mm	62	16
Sheet Metal Drill HSS	383006	6 - 20 mm Ø	8.0 mm	70	41
Sheet Metal Drill HSS	383016	16 - 30 mm Ø	10.0 mm	78	115
Sheet Metal Drill HSS	383030	6 - 30 mm Ø	10.0 mm	95	125
Drill Paste	383100				45
Sheet Metal Set Complete	383050	In Steel Case consisting of items 1, 2, 3 + Drill Paste			550

## Precision Step Drill

- Universal tool especially intended for working on thin sheet metal e.g.: in switchboard manufacture, vehicle sheet body work and for general industrial sheet metal work
- Within the boring range the drills can make holes in the thinnest material without deformation up to a maximum material thickness of 10mm.
- Drills with borer sizes overlap to provide clearance up to the next bore size in material thickness' up to 4mm.
- Twin cut geometry û axial and radial provides smooth surface on inside of sheet.
- The laser scaled markings on the drill allow you to read off the diameter of the hole as it is being made



Order ref. 384150

Order ref. 384272



Description	Order-ref.	Steps	Hole range	Shaft Ø	— mm —	⚖
Step-drill HSS	384104	1 mm	4 - 12 mm Ø	6,0 mm	69	20
Step-drill HSS	384112	1 mm	12 - 20 mm Ø	9,0 mm	75	65
Step-drill HSS	384120	1 mm	20 - 30 mm Ø	12,0 mm	93	190
Step-drill HSS	384204	2 mm	4 - 20 mm Ø	8,0 mm	75	50
Step-drill HSS	384206	2 mm	6 - 30 mm Ø	10,0 mm	95	140
Step-drill HSS	384279	PG-Throughway	PG 7 - 29	12,0 mm	86	180
Step-drill HSS	384271	PG-Throughway	PG 7 - 21	12,0 mm	75	140
Step-drill HSS	384272	PG-Pilot hole	PG 7 - 21	12,0 mm	86	160
Spare drill	384270	for 384271+ 341272	7 mm Ø			20
Step-drill Set	384150	In Steel Case box with items 1,2,3 and Drill Paste				650

## Set Step/Cone and Counter sink drill with handle

- Ergonomic handle with magnetic bit holder 1/4"
- Cone drill Ø 3 - 14mm
- Step drill for through hole Ø 4, 6, 8, 10, 12mm
- Step drill for through hole. Ø 9, 11, 13, 15, 17, 19, 21mm
- Counterbore 90° with head diameter 20.5mm



Description	Order ref.	INT-Id.	Dimensions	⚖
Set Step/Cone and Counter sink drill with handle	384280	74130	240x125x35mm	approx 250

## Precision Milling Drill

- Universal tool for drilling and milling in one operation
- Mill out to any required contour
- Suitable for metal, wood or plastic
- In steel, the milled depth should not exceed the diameter of the hole
- Titanium nitrate coated for long life



Description	Order ref.	Number of Cutting Edges	Shank Ø	— mm —	⚖️
Milling Drill HSS-TIN	384600	5	6.0 mm	90	15
Milling Drill HSS-TIN	384800	6	8.0 mm	90	25
Drilling Paste	383100				45

## Light Hammer

- Dead blow hammer
- Head made of yellow Polyurethane, very durable
- Head replaceable
- Insulated red steel shaft, black rubber handle
- Professional multi-coated insulation



**1000V**  
EN/IEC 60900:2004

Description	Order ref.	Length	Handle Ø	Head Ø	Head Weight	⚖️
Light Hammer	410322	288	26	25	200	533
Light Hammer	410335	300	26	35	400	750

## Locksmith Hammer with Hickory handle

- Head protected due to electro-inductive tempered edges
- Double curved non-slip Hickory handle



Description	Order ref.	⚖️
Locksmith Hammer with Hickory Handle 200g	411002	200
Locksmith Hammer with Hickory Handle 500g	411005	500
Locksmith Hammer with Hickory Handle 1000g	411010	1000
Locksmith Hammer with Hickory Handle 1500g	411015	1500
Locksmith Hammer with Hickory Handle 2000g	411020	2000

## Brushes Angled or Straight

- With replaceable head (except 1" straight brush)
- Handle with professional multi-coated insulation
- For cleaning and maintenance
- Plastic brush available with fixed angled head

### Case for Brushes

- Made of red plastic with press stud
- Suitable for insulated brushes of up to 400 mm



Wood design insulated

**1000V**  
EN/IEC 60900:2004

All plastic design

Description	Order ref.	Length	⚖️
Brush 1" angled	552401	400	60
Brush 1 1/2" angled	552402	400	100
Brush 2" angled	552403	410	115
Brush 1" straight	552404	320	80
Brush 1 1/2" straight	552405	410	100
Brush 2" straight	552406	410	130
Brush 1" plastic angled	552431	400	60
Brush 1 1/2" plastic angled	552432	400	70
Brush 2" plastic angled	552433	400	90

Description	Order ref.	⚖️
Brush Head 1" angled	552411	10
Brush Head 1 1/2" angled	552412	20
Brush Head 2" angled	552413	25
Brush Head 1 1/2" straight	552415	15
Brush Head 2" straight	552416	20
Brush Handle 1"	552421	90
Brush Handle 1 1/2"	552422	100
Brush Handle 2"	552423	120
Brush Case (440 mm x 70 mm)	552400	50

### Wedge Wood with Groove

- Material: Hardwood
- Aid for cutting conductors, non-slip

Order ref. 653000

### Wedge Wood with Groove

- Material: Hardwood

Order ref. 653001

### Wedge Plastic red without Groove

- Material: Polyamide, re-inforced
- Light design

Order ref. 652002



### Wedge Plastic grey without Groove

- Material: "Hostalit" - hard
- High impact resistance

Order ref. 652001



### Wedge Plastic grey with Groove

- Material: "Hostalit" - hard
- Aid for cutting conductors, non slip
- Grey or red

Order ref. 652004

Order ref. 652005



### Wedge Plastic heavy design

- Material: Hostalit - hard
- Very suitable for use with large size cable cutter

Order ref. 652007



### Wedge Plastic red

- Material: Polyamid - hard
- Aid for cutting conductors, non slip
- Especially for fitting of branch terminals

Order ref. 652003



### Bordering Chisel

- For NKBA-Cable
- 25 mm Ø
- Tape 70 mm with 30 mm Radius
- Non-brittle red plastic

Order ref. 654000



Description	Order ref.	Length	Width	High	⚖️
Wedge Wood with Groove	653000	250	25	30 to 0	54
Wedge Wood, without Groove	653001	165	20	37 to 0	45
Wedge Plastic, red without Groove	652002	165	20	30 to 0	43
Wedge Plastic, grey without Groove	652001	165	20	37 to 0	93
Wedge Plastic, grey with Groove	652004	165	20	37 to 0	90
Wedge Plastic, red with Groove	652005	165	20	37 to 0	90
Wedge Plastic, grey with Groove	652007	250	30	30 to 0	140
Wedge Plastic, red	652003	170	20	10 to 0	100
Bordering Chisel, red	654000	140			63

### Wedge Plastic red with Groove heavy design

- Material: Polyamide - hard
- Very suitable for use with large size cable cutter
- Aid for cutting conductors, non slip
- especially for fitting of branch terminals



Order ref. 652006  
 1000V  
 EN/IEC 60900:2004

### Wedge Plastic red with Groove and Hook

- 270 mm
- Groove width 22



Order ref. 65200601  
 1000V  
 EN/IEC 60900:2004

Description	Order ref.	Length	Width	High	
Wedge Plastic, with Groove	652006	240	30	30 to 5	100
Wedge red, with Groove and Hook 270 mm	65200601	270	37	31 to 2,5	

### Work and Emergency Power Light 10 Watt model

- With flashing light indication and two colour discs.
- With 10 W 'Halogen' and 1.2 W pilot lamp.
- Light source can be rotated to 120 degrees from vertical.
- Rechargeable batteries, hermetically sealed.
- Built in electronic charger – no overcharging.
- Vehicle adapter socket (12V-24V /DC) with LED display
- Supplied with hook to hang on wall and fixing strap.
- Protection class 2 to IP44 (resistant to water spray)



### Work and Emergency Power Light 5 Watt model

- Same details as 10 Watt model except:
- With 5.5 W Xenon- and 1.2 W pilot lamp
- Cannot be operated from vehicle cigarette lighter

Description	Order-ref.	Battery	Battery-life	Charge	Charging Voltage	
Work and Emergency power Light Model 10/3	53701001	6.5 Ah / 6 V	3 h / 29 h	18 h	230 V / 12-24 V	2600
Work and Emergency power Light Model 5/6	537005	3.2 Ah / 6 V	6 h / 29 h	18 h	230 V	2600
Storage Battery for Work Light	537105	6.5 Ah / 6 V		18 h		2000
Glass Filter Insert for Work Light	537905					100

### Work and Emergency Power Light EX SLE 15

Emergency light for the usage in gas and dust explosionprone areas of the Ex-Zones 1, 2 , 21 and 22.

- Blinking operation with the main lamp and two colour discs.
- Xenon main lamp and LED pilot lamp.
- Light source can be rotated to 110 degrees
- Maintenance-free lead-gel accumulator
- Small sized vehicle adapter socket (12V-24V /DC)
- EX-Identification: II 2G Ex ib II C T4 / II 2D Ex ibD 21 T 135°C
- Protection class 2 to IP44 (resistant to water spray and dust)
- Light endurance 4h at 3.2W Xenon lamp
- Light endurance 35h with LED lamp



Description	Order-ref.	Battery	Charge	Charging Voltage	
Work and Emergency power Light EX SLE 15	537019	3.5 Ah / 4 V	15 h	230 V / 12-24 V	1900

## Work Light

- High powered rechargeable working light with focussing adjusters.
- Rechargeable from 240/120V vehicle plug 12/24
- Ni-Cd rechargeable battery with over charge limiter. No memory effect.
- With carrying strap, charge control indicator and electronic battery life indicator.
- Impact resistant, self-extinguishing plastic case
- Power source : E10, 5.2V/0.85A 4.4W Halogen
- Beam distance : 800 - 1200 m
- Battery life : 160 min.
- Charging time : 16 Hrs.



Description	Order ref.	Dimensions	
Work Light 4.4 W Halogen 220/24/12 V	537004	255 x 88 x 88 mm	230

## Work Light

- High powered, re-chargeable halogen lamp with Morse Code facility, magnetic fixing and carrying bag.
- Rechargeable from 240/120v supply or from 12v vehicle socket.
- Ni-Cd battery with over charge limiter. No memory effect.
- Unpluggable battery source.
- High impact self-extinguishing plastic casing
- Light Source : P13.5s, 4.8V/0.5A 2.4W Halogen
- Beam Distance : 750 metres
- Battery Life : 70 mins.
- Charging Time : 16 Hrs.



Description	Order-ref.	Dimensions	
Portable Light 2.4 W Halogen 220 V	537002	175x70x70mm	230
Vehicle Charge Plug (12 V) for 537002	537012		130
Sphere rechargeable battery for 537002	537011		130

## LED Light 500

- Bright High powered rechargeable working light with focussing adjusters.
- Chargeable at 230V-Ac or 12/24V DC
- Ni-MH rechargeable battery
- 2 sideways magnets
- Protection class IP54
- Power source : E10, 5.2V/0.85A 4.4W Halogen
- Battery life : 4 h
- Charging time : 2 h.




Description	Order ref.	Dimensions	
LED Light 500	537038	255 x 88 x 88 mm	230

## LEMPLITE LED 60 / LED 120

The range of applications of the cordless LED LITE includes storage depot lighting. The clear front glass provides optimum lighting efficiency.

- White LEDs
- Homogeneous spread
- 60 LEDs for near range or 120 LEDs for illumination a bigger working space
- Available in 12V/DC, 24V/DC or 230V/AC
- Operating time more than 4 hours
- Perfect fastening with magnetic holder ( Order ref. 537050 )



Description	Order- ref.	Dimensions	
LempLite LED 60	537046	225 x 120 x 147 mm	1650
LempLite LED 120	537047	365 x 120 x 147 mm	2900

### Flashlight, explosion-proof

- Explosion-proof Flashlight according to 94/9/EG (ATEX)
- Complies with requirements for electrical equipment operating in explosive risk areas (EN 50014, EN 50019, EN 50020)
- Waterproof, anti-static housing with suspension ring
- Unbreakable safety lens
- 3-way switch for flashing and with protection cover
- The lamp can only be opened by authorised persons holding a special key
- Delivery without battery (2 x 1.5V Zinc-Coal R20)



Description	Order- ref.	Dimensions	
Flashlight, explosion-proof	537020	190 mm x 45 mm Ø	140

### Wire Stripper / Varnish Scraper

- For removing insulation varnish on wires of 0.4 - 1.2 mm
- Blade insulated
- Professional multi-coated insulation
- Scraper blade replaceable



Description	Order ref.	Length	
Wire Stripper / Varnish Scraper	255000	140	44

### Angled Mirror

- Extended plastic handle
- Search mirror 24 mm Ø, flat



Description	Order ref.	Length	Handle Ø	
Angled Mirror	111799	285	8.4	16

### Welding Mirror

- Insulated, flexible shaft
- Mirror made of metal foil, back and edges insulate



Description	Order ref.	Length	Joint Ø	Handle Ø	
Welding Mirror	555000	510	14.3	31.5	316
Repl. Mirror for Welding Mirror	555001				

### Magnetic Lifter

- Insulated, flexible shaft
- For removing metal parts from installations
- Max. pulling force: 0.5 N



Description	Order-ref.	Length	Joint Ø	Handle Ø	
Magnetic Lifter	111900	510	13.7	33	330

## Leather Glove

- With long sleeve
- Colour: beige
- Palm made of Chrome-grain leather
- Back of the hand made of Chrome-split leather
- Not suitable for work under voltage



Description	Order ref.	Length	Length sleeve	⚖
Leather Glove	632004	350	14 cm	245
Leather Glove with 15cm sleeve	632109	350	15 cm	245
Leather Glove with 15cm sleeve	632110	350	15 cm	245
Leather Glove with 15cm sleeve	632111	350	15 cm	245
Leather Glove with 30cm sleeve	632119	520	30 cm	245
Leather Glove with 30cm sleeve	632120	520	30 cm	245
Leather Glove with 30cm sleeve	632121	520	30 cm	245

## Standard Design

### Lemp Installation Tent

The Lemp Installation Tents are available in two standard designs with different basic forms: Pointed- and flat roof

- The tent consists of a PVC-coated Polyester texture, which absorbs the daylight only slightly and has flame retardant properties.
- The tent poles are made of Carbon with a lockable hinge .
- The construction is relatively light weight compared with conventional tents which enables fast assembly.
- The slide fastener of the pointed-roof tents allows putting two tents together in a bigger work area .
- All tents are supplied with a carrier bag.



Description	Order ref.	Length x Width x Height	⚖
Lemp Installation Tent Type/5S flat	611109	140 x 140 x 200	
Lemp Installation Tent Type/5S flat	611110	180 x 180 x 200	
Lemp Installation Tent Type/5S flat	611111	250 x 180 x 200	
Lemp Installation Tent Type/5S flat	611112	210 x 210 x 200	
Lemp Installation Tent Type/5S flat	611113	250 x 250 x 200	
Lemp Installation Tent Type/5S flat	611114	300 x 300 x 215	
Lemp Installation Tent Type/180PZ spire	611115	180 x 180 x 170	
Lemp Installation Tent Type/250PZ spire	611116	250 x 200 x 190	
Lemp Installation Tent carrier bag Type 180 with slide fastener	611117	Ø 40	
Lemp Installations Tent carrier bag Type 250 with slide fastener	611118	Ø 40	

## Cable Soldering Tent

- Soldering often has to be carried out outdoors. We offer tents and parasols for the protection of the team and material in all weathers and against intensive sunlight.
- Material and design have proved to be very useful on building sites.
- All tents are gable-shaped, with a 20 cm wide idle strip all round, ridge re-enforced, fitted over a steel frame.
- All tents can be opened at both ridge ends and are furnished with three outside and two inside fastening sets.

<u>PVC Tents:</u>	made of transparent material, Polyester, PVC laminated on both sides; white
<u>Canvas Tents:</u>	made of heavy, impregnated and fungicide-treated canvas; green
<u>Accessories:</u>	warning strips with red/white squares running all around the tent half way up, additional lettering possible on request
<u>Tent Frame (univ.)</u>	collapsible; made of steel tubing, rust-proof

- ▶ The tent must not be stored in wet conditions over a long period of time.



Description	Order-ref.	Length x Width x Height	⚖️
Tent for Soldering Work, PVC, white	611001	2.0 x 1.8 x 1.8	10500
Tent for Soldering Work, PVC, white	611002	2.6 x 2.0 x 2.0	13500
Tent for Soldering Work, PVC, white	611003	3.0 x 2.0 x 2.0	15000
Tent for Soldering Work, Canvas	611101	2.0 x 1.8 x 1.8	10000
Tent for Soldering Work, Canvas	611102	2.6 x 2.0 x 2.0	13000
Tent for Soldering Work, Canvas	611104	3.0 x 2.0 x 2.0	14500
Tent Rods, universal	611201	2.0 x 1.8 x 1.8	15500
Tent Rods, universal	611202	2.6 x 2.0 x 2.0	24500
Tent Rods, universal	611203	3.0 x 2.0 x 2.0	28000
Suspension Ropes for Tent and Parasol (3/Set)	621002		80
Warning Strip, red/white, per metre	621004		10
Bag for Tent	621005		200
Window with Flap for Tent	621006		--

## Rectangle Umbrella

- Easy to transport and easy to fit, with extra strong rack
- Brace made of 16 x 2 mm aluminium tube, umbrella mast made of 35 x 1.5 mm Steel tube
- Crown and Slider made of zinc coated sheet, joint made of solid cast aluminium
- Spring end piece facilitates assembly and stretches the cover
- Available with 8th-partitions
- Weight with cover P95: approx 12 kg complete



## Umbrella for Cable-Soldering

- Umbrella lower part with ground spike (straight finish)
- Tubing diameter 38 mm
- Can be pivoted for protection against solar radiation and wind
- Varnished steel frame
- Covering made of heavy sail cloth
- Colour: olive-green; sail cloth flame resistant to water pressure, rot resistant
- Suspension ropes (Order ref. 621002) to ensure stability in windy conditions

- ▶ Don't store the umbrella in wet conditions over a long period of time

Description	Order-ref.	⚖️
Umbrella for Soldering 2.0 m swivelling (Tube Ø 25mm)	621000	3.3 kg
Umbrella for Soldering 2.5 m without swivelling (Tube Ø 38mm)	621001	9.3 kg
Umbrella for Soldering 3.0 m without swivelling (Tube Ø 38mm)	621011	11 kg
Suspension Rope for Tent and Soldering-Umbrella (Set á 3 pieces)	621002	80g
Cover Bag for Cable Soldering-Umbrella 2.0 m	621008	220g
Cover Bag for Cable Soldering-Umbrella 2.5 m	621003	200g
Cover Bag for Cable Soldering-Umbrella 3.0 m	621012	300g
Additionally Ground Tube for Cable Soldering-Umbrella 2.0 m	621013	400g
Additionally Ground Tube for Cable Soldering-Umbrella 2.5 m	621014	450g
Additionally Ground Tube for Cable Soldering-Umbrella 3.0 m	621015	450g
Rectangle-Umbrella 2.8 x 2.4 mm with Ground Tube	621050	12 kg
Ground Tube for Rectangle-Umbrella	621051	

## Gas bottle (small)

- Made of seamless steel; TÜV approved
- With hook and valve; without hose nipple and union nut
- Suitable for use with small soldering and warming-up burners, especially in the jewellery and dental trade, as well as for signal and telecommunication projects using the soldering iron (Order ref 973000) or soldering burner/shrink heater element LS 3 (Order ref 971003)

**Information:** According to Industrial Injury Board guidelines and Safety Regulations there is no need for a hose-burst protection on small bottles. The user can refill by means of a refiller from a larger container holding 3 to 11 kg



Description	Order ref.	Quantity	mm	Valve Outlet	kg
Bottle without Base	967042	425 g	340 x 83	G 3/8 LH	1800
Bottle with Base	967142	425 g	340 x 83	G 3/8 LH	2100

## Accessories:

Description	Order ref.	Valve Inlet	Valve Outlet	kg
Vent Valve for 425 g Bottle	968142	W 19.80 x 1/14 keg	G 3/8 LH	240

## Portable Refill Rack

This Rack has two important functions:

- Transporting propane gas bottles weighing 5 and 11 kg; the bottles are easily wheeled to the filling station or working area (one bottle filled with 11 kg of propane gas (weighs 25 kg)
- Refill of 425 g bottles from reserve containers weighing 5 and 11 kg; dropping of bottle or any damage or fracture to the bottle valve is ruled out due to special refilling device.



Description	Order ref.	mm	kg
Portable Refill Rack	968500	820(L) x 450(B) x 1150(H)	13,5

## Refill Connector

- For filling small pressure gas bottles with a quantity of 90 g and 425 g from containers weighing 3.5 and 11 kg



Description	Order ref.	Valve Inlet	Valve Outlet	kg
Refill Connector	958000	Nut W 21.80 x 1/14 lks.	Nut G 3/8 LH	140

## Multi-Open-End Spanner

- With widths necessary for connecting propane gas bottles



Description	Order ref.	Spanner Widths	kg
Multi-Open-End Spanner	968600	9, 12, 15, 19, 30	120

## Medium Pressure Regulator /R

- Safety regulators maintains constant outgoing pressure regardless of variation of incoming pressure and differences in flow within certain limits. The flow quantity limit controls the hose burst protection.
- Solid brass fitting, very strong; compact construction, therefore regulator and hose burst protection remain in protecting bottle surround.
- Gas outlet connection angled downward hose, so avoiding leverage force and bending of hose.



Order- ref. 959306



Order- ref. 959303

Description	Order ref.	Rated Flow	Gas Inlet	Gas Outlet	Hose	⚖
Medium Pressure Regul.	959302	bis 1.5 kg/h	G 3/8 LH / 425 g	Conn. G 3/8 LH	Ø 4mm o. Ø 6mm	340
Medium Pressure Regul.	959303	bis 1.5 kg/h	W 21.80x1/14lks / 3-33 kg	Conn. G 3/8 LH	Ø 4mm o. Ø 6mm	420
Medium Pressure Regul.	959304	bis 4.0 kg/h	W 21.80x1/14lks / 3-33 kg	Conn. G 3/8 LH	Ø 4mm o. Ø 6mm	420
Medium Pressure Regul.	959306	bis 1.5 kg/h	W 21.80x1/14lks / 3-11 kg	Conn. G 3/8 LH	Ø 4mm o. Ø 6mm	420
Medium Pressure Regul.	959305	bis 4.0 kg/h	W 21.80x1/14lks / 3-11 kg	Conn. G 3/8 LH	Ø 4mm o. Ø 6mm	420

## Hose Burst Protection /S

to be connected to Safety Regulator (above ground level)

- The hose burst protection is a safety device which automatically shuts off the gas supply if gas flow is too high (i.g. hose burst).
- When using containers exceeding volume of 1 litre and a hose longer than 40 cm above ground level, hose burst protection is necessary in safety regulations.
- The hose burst protection follows the regulator.
- Operation by push button. The protection device immediately comes into operation and the valve can be opened at all times and at any speed.
- The blocking device stops the total gas supply.
- Name plate giving pressure, flow capacity, hose diameter, operating instructions



Description	Order ref.	Rated Flow	Gas Inlet	Gas-Outlet	Hose	⚖
Hose Burst Protection	949303	bis 1.5 kg/h	Nut G 3/8 LH	Conn. G 3/8 LH	Ø 4mm o. Ø 6mm	140
Hose Burst Protection	949304	bis 4.0 kg/h	Nut G 3/8 LH	Conn. G 3/8 LH	Ø 4mm o. Ø 6mm	140
Hose Burst Protection	949307	bis 8.0 kg/h	Nut G 3/8 LH	Conn. G 3/8 LH	Ø 4mm o. Ø 6mm	140

## Safety Regulator with integrated Hose Burst Protection / RS (above ground level)

- Regulator and hose burst protection combined in one fitting.
- No screw connection; shorter construction.
- The hose burst protection, required by Safety Regulations, is included in this design.



Order- ref. 960005

Description	Order ref.	Rated Flow	Gas Inlet	Gas-Outlet	Hose	⚖
Medium Pressure Reg. RS	960001	up to 1.5 kg/h	G 3/8 LH / 425 g	Conn. G 3/8 LH	Ø 4mm o. Ø 6mm	300
Medium Pressure Reg. RS	960002	up to 1.5 kg/h	W 21.80x1/14lks / 3-11 kg	Conn. G 3/8 LH	Ø 4mm o. Ø 6mm	340
Medium Pressure Reg. RS	960003	up to 4.0 kg/h	W 21.80x1/14lks / 3-11 kg	Conn. G 3/8 LH	Ø 4mm o. Ø 6mm	350
Medium Pressure Reg. RS	960005	up to 4.0 kg/h	W 21.80x1/14lks / 3-33 kg	Conn. G 3/8 LH	Ø 4mm o. Ø 6mm	350

## Safety Regulator with integrated Leak Test and Hose Burst Protection / RDS

(below ground level)

- **Required by Safety Regulations for use below ground level.**
- Apart from the safety regulator and hose burst protection a leak testing device has been built in so the whole equipment is automatically tested for leaks before use. The leak test also includes the complete pipe system as well as in- and outlet connections and device valve. Standard hoses and connections comply with this safety function. Safety Regulations (UBG 43) require regulators to be equipped with a leak test device and hose burst protection with a rated value of up to 1.5kg/h (RDS) when connected to liquid gas operated tools used below ground (i.e. cable jointing).



Description	Order ref.	Rated Flow	Gas Inlet	Gas Outlet	Hose	⚖️
Med. Pressure Reg. RDS	959300	bis 1.5 kg/h	Conn. G 3/8 LH / 425 g	Conn. G 3/8 LH	Ø 4mm	540
Med. Pressure Reg. RDS	959301	bis 1.5 kg/h	W 21.80x1/14lks / 3-33 kg	Conn. G 3/8 LH	Ø 4mm	540

### Fitting with 2 and 3 Outlets

- Solid brass fitting
- Strong, non detachable hand wheels



Description	Order-ref.	Gas-Inlet	Gas-Outlet	⚖️
Fitting with 2 Outlets	956001	Nut G 3/8 LH	Conn. G 3/8 LH	340
Fitting with 3 Outlets	956101	Nut G 3/8 LH	Conn. G 3/8 LH	440

### Hose Connections (with nozzle)

- Connection for 425 g bottles, medium pressure regulator, hose burst protection, fitting, grip and devices



Description	Order-ref.	Hose Connection	⚖️
Hose-Connection	958100	Nut G 3/8 LH with 4 mm spout	33

### Hose

- Ready for connection
- Inside Ø 4mm x wall thickness Ø 4mm



Description	Order ref.	Hose Connection	— m —	⚖️
Hose for Device	952003	G 3/8 LH and G 3/8 LH	3	680
Hose for Device	952004	G 3/8 LH and G 3/8 LH	4	910
Hose for Device	952006	G 3/8 LH and G 3/8 LH	6	1350

### Gas lighter



Description	Order ref.	Model	⚖️
Gas lighter	977000	Pistol grip	80
Gas lighter	978000	Clampform	55

### Burner with Automatic Throttled Flame

- With regulating valve and stop valve for a high and throttled (pilot flame) flame, swivelling lever and hose connection.
- Complies with guidelines of the Industrial Injury Board. Hand held burners and surface driers, which can produce a flame longer than 100 mm, must be fitted with a device that automatically reduces the flame to approx. 80 mm when burner is put aside. Burners with throttled flame adjustment must be fitted with a support stand.

### Standard Burner

- With regulating valve and stop valve and hose connection



Description	Order ref.	Gas Inlet	Length	⚖️
Burner with automatic throttled Flame	969001	Nut G 3/8 LH	180	420
Standard Burner	969002	Nut G 3/8 LH	180	435

### Burner with Piezo Ignition

- Ignites the gas in the burner nozzle by pressing the ignition-lever
- When ignition lever is relaxed the flow rate is interrupted.



Description	Order ref.	Gas Inlet	Nominal discharge	⚖️
Burner with Piezo-Ignition	969003	G 3/8 LH 360° turnable	6 kg/h max.	500

### Fine Soldering Torch

- Precision soldering irons for signal and telecommunication joints, when underground. It is essential that the MAC-value is strictly adhered to with every gas setting and angle of the torch. MAC-values for CO = 30 ppm and for CO<sub>2</sub> = 5000 ppm are not exceeded with this type of soldering iron.
- Precision soldering irons made of high-quality steel with long lasting fine soldering tip.



Description	Order ref.	Gas Consumption (1.5 bar)	⚖️
Precision Soldering Iron with Copper-Tip	973000	18 g/h	220
Replacement Copper Tip	973803	--	40

### Soldering Iron Inserts and Copper Tips

- For burner (Order ref 969002)
- Non flaking permanent soldering tip, iron and chrome coated
- Corrosion resistant - also in soldering area



Description	Order ref.	Gas Consumption (1.5 bar)	⚖️
Soldering Iron Insert with Screen and Copper Piece	976804	70 g/h	260

## Soldering Burner Insert for Burner

- For soft and hard-soldering, flame cut, tin coating for melting processes, originally designed for work in the jewellery and dental trade.
- Soldering/shrink heater element LS 9 Ø and upwards, the flame can be higher than 100 mm thus requiring a throttle (Order ref 969001).

► Suitable for Burner with Order ref. 969001 or 969002



Description	Order-ref.	Flame Ø mm	Burner Curve	Gas Consumption (1,5 bar)	⚖️
Soldering Burner Insert	971003	LS 3	60°	23 g/h	80
Soldering Burner Insert	971005	LS 5	80°	70 g/h	100
Soldering Burner Insert	971007	LS 7	80°	190 g/h	120
Soldering Burner Insert	971009	LS 9	80°	430 g/h	100

## Burner Insert (strong version) for Burner handle

- For fitting soldering of up to 35 mm, bending, melting, warming up, heating, drying
- Pipe length 100 mm

► Suitable for Burner handgrip with Order ref. 969001 or 969002



Description	Order ref.	Flame Ø mm	Burner Curve	Gas Consumption (1.5 bar)	⚖️
Burner Insert (strong version)	971020	LS 20	60°	530 g/h	175
Burner Insert (strong version)	971030	LS 30	60°	980 g/h	200
Burner Insert (strong version)	971040	LS 40	60°	1265 g/h	235

## Soldering torch insert for Burner Handle with Piezo-Ignition

- For soft soldering of copper pipes and hard soldering of copper pipes up to 28 mm pipe Ø with low melting hard plumb.
- For warming, glowing up, melting, hardening, thawing.
- Slide adjustment of airflow alters shape of the flame from fine point to a stump flame - or intermediate setting
- Those solder - / shrink-in-corrode are 360°C swivelling. (exception is Order- ref. 972030)

► Suitable for Burner with Piezo-Ignition Order ref. 969003



Description	Order ref.	Flame Ø mm	Burner Curve	Gas Consumption (1.5 bar)	⚖️
Burner with Piezo-Ignition	972005	LS 5	60°	100 g/h	200
Burner with Piezo-Ignition	972007	LS 7	60°	175 g/h	220
Burner with Piezo-Ignition	972009	LS 9	60°	340 g/h	250
Burner with Piezo-Ignition	972020	LS 20	60°	425 g/h	275
Burner with Piezo-Ignition	972030	LS 30	60°	985 g/h	300

## Types of Furnace

### Application range :

- For heating and melting tin and lead or compound

### Equipment:

- Central burner; gas ignition placed outside burner; adjustment and stop valve; flame observation gap;
- Punched bottom plate facilitates easy removal of dripped residue
- Bucket is set into the furnace surround and cannot tilt exhaust gas is also used for heating
- Thermoelectric ignition fuse, piezo ignition

### Combined high performance oven for heating and melting. Oven and store in one piece of equipment.

- Used in cable laying, for drying and warming-up cable sheaths and jointing tents .  
Also used for heating cable jointing compounds, as well as heating up scalding compound, filling compound, sealing compound and mixed wax
- When used below ground level a waste gas hose is fitted to the central connection
- When heating compound, the pots will be either placed on the radiant heater or directly into the furnace
- Thermoelectric ignition safety device

### Accessories:

- Waste gas hose with fibreglass seal for connection to heater and furnace, for discharging combustion gases; the hose is flexible and 4 m long



Picture: 989002



Picture: 989002 + 986800



Picture: 989002 + 989004 + 989005



Picture: 989100

Description	Order ref.	Heating Output	Gas Inlet	Gas Consumption (1.5 bar)	Dimensions	⚖️
Furnace for Melting	989002	5.5 kW	G 3/8 LH	440 g/h	310 x 320 mm Ø	7100
Double radiation body	989004				310 mm Ø	2500
Cover with exhaust con. pipe	989005				310 mm Ø	1800
Exhaust Hose, 4 m	989100					5400

## Bucket for melting Sealing Compound

- With locking lid and covered spout
- Open handle with low-placed grip outside furnace surround
- Spout ensures precise and non-dripping pouring in precise amounts
- The re-inforced bottom prevents sealing compound sticking when heated
- Galvanized



Picture: 986800

Description	Orderref.	Filling Capacity	Dimensions	⚖️
Bucket for melting Sealing Compound	986800	15 l	300 x 320 mm Ø	5300
Bucket for melting Sealing Compound	986801	7 l (no spout)	230 x 220 mm Ø	3500

## Thermometer

- temperature range: 50° C - 250° C



Description	Order ref.	Dimensions	⚖️
Thermometer	986900	140 mm	100


## Portable Infrared Heater for use inside Buildings

- For use inside buildings or below ground level (safety regulator with integrated leak test and hose burst protection RDS, complying with Safety Regulations)

### Technical Features:

- With connector for flexible waste gas hose, for use inside buildings and below ground level, i.e. tents or trenches
- Valve housing protects the regulator and stop valve, the valve for the thermoelectric ignition safety device, gas inlet and piezoelectric ignition
- The radiant heater can be swivel adjusted round by means of a toothed washer joint, ensuring firm position and preventing therefore unintentional adjustment
- The heater screen prevents contact with the hot wire lattice
- The sturdy and stable mounting frame remains within the radius of heater, therefore preventing tripping over its legs
- Made of aluminium and lightweight, can be collapsed for easy transport and to save space.




Description	Order ref.	Heating Output	Gas Inlet	Gas Consumption (1.5 bar)	Dimensions	
Infrared Heater	983000	3.2 kW	G 3/8 LH	250 g/h	300 x 435 mm (BxH)	7200

## Exhaust Gas Hose


- To disperse the exhaust gas
- To connect with the exhaust gas diffuser of the infrared heating emitter or digester
- Flexible exhaust Gas Hose with glass fibre seal, length 4 m



Description	Order ref.	
Exhaust Gas Hose, 4 m	989100	5400

## Soft and Hard Soldering Set with 425g Gas Burner



Description	Order ref.	
Soft and Hard Soldering Set	951001	7000

consisting of:

Description	Order ref.
Solder Box with Bottle Support	951006
Burner Handle with autom. throttled Flame	969001
Precision Soldering Iron Burner	973000
Soldering Burner Insert, Flame Ø 5 mm	971005
Soldering Burner Insert, Flame Ø 7 mm	971007
Soldering Burner Insert, Flame Ø 9 mm	971009
Burner Insert, (strong version) with Flame Ø 40 mm	971040

Description	Order ref.
Hose 4 m	952004
Med. Pressure Control RS 1.5 kg/h (0.425 kg)	960001
Gas Lighter, Pistol-shaped	977000
Multi-open-end Spanner	968600
Refiller (Nut)	958000
Small Gas Bottle 0.425 kg, without base	967042

## Soldering Set for Use with 3-11 kg Propane Gas Bottles

- additional to connecting tube
  - 2 x 958100
  - 2 x 953802



Description	Order ref.	
Soldering Set for 3-11 kg Propane-Gas Bottle	951003	5300

consisting of:

Description	Order ref.
Solder Box with Bottle Support	951006
Burner Handle with autom. throttled Flame	969001
Soldering Burner Insert, Flame Ø 3 mm	971003
Soldering Burner Insert, Flame Ø 5 mm	971005
Soldering Burner Insert, Flame Ø 7 mm	971007
Soldering Burner Insert, Flame Ø 9 mm	971009
Burner Insert, (strong version) with Flame Ø 20 mm	971020

Description	Order ref.
Burner Insert, (strong version) with Flame Ø 30 mm	971030
Burner Insert, (strong version) with Flame Ø 40 mm	971040
Hose 4 m	952004
Med. Pressure Control 1.5 kg/h 3-33 kg (not illustr.)	959303
Hose Burst Protection 1.5 kg/h	949303
Gas Lighter, Pistol-shaped	977000
Multi open end Spanner	968600

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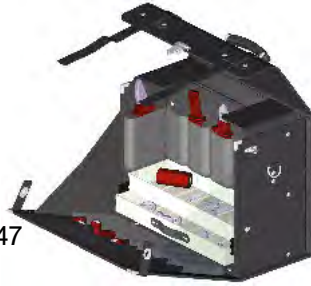
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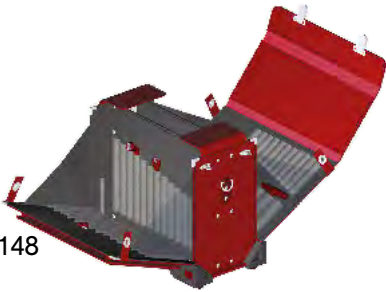
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## Tool Cases and Equipment

- Belt Cases and Tool Holders
- Shoulder Cases, Carrying Cases , Tool Cases
- Hard Tip Cases, Plastic Cases, Folding Cases,
- Complete Equipment

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Order ref. 712331

**Leather Belt Pouch**

- Double belt pouch made of suede or leather. (Picture: leather)
- Slides over belt up to 40 mm width



Order ref. 712531

**Belt Pouch**

- With flap and velcro fastening
- Wide leather loop
- Pouch and flap of heavy soft leather
- Without hindering inside and outside edges
- Slides over belt up to 40 mm width



Order ref. 712536

**Belt Pouch**

- With two metal eyes for hanging up
- Additional shoulder straps
- Slides over belt up to 40 mm width



Order ref. 721331

**Double-Belt Pouch**

- Double belt pouch made of suede or leather.
- Special design for fastening on safety straps.
- Slides over belt up to 40 mm width



Order ref. 742032 / 742030

**Strap Pouch of Chrome Leather**

- Long loop for safety and fastening strap
- Stitched and riveted



Order ref. 743000

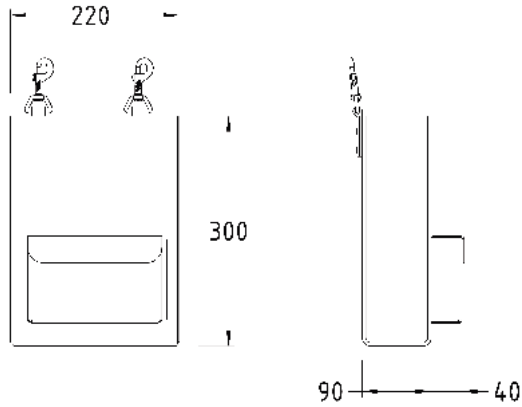
**Strap Pouch of Sail Cloth**

- Bottom reinforced
- With long loops for safety and fastening strap
- Popular pouch used for work on pylons

Description	Order ref.	Height	Width	Depth	⚖️
Belt Pouch made of suede Leather	712331	270	210	80	200
Belt/Strap Pouch with flap,suede leather	712531	330	190	80	445
Belt/Strap Pouch with flap,suede leather	712536	330	190	80	500
Strap for Pouch 712536 (single)	733355	--	--	--	60
Double-Belt Pouch, leather	721331	270	210	80	380
Strap Pouch short loops, chrome leather	742030	300	200	80	420
Strap Pouch long loops, chrome leather	742032	300	200	80	400
Strap Pouch,sail cloth	743000	380	295	80	260

## Carrying Bag for Belts and Harness

- Made of black imitation leather
- 2 Partitions for standard tools
- Two spring hooks for fastening on safety harness
- 4 separate compartments
- Quick lock buckle

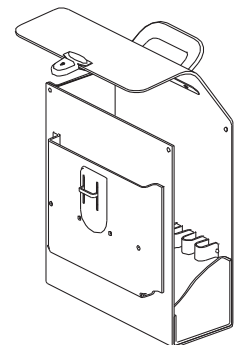
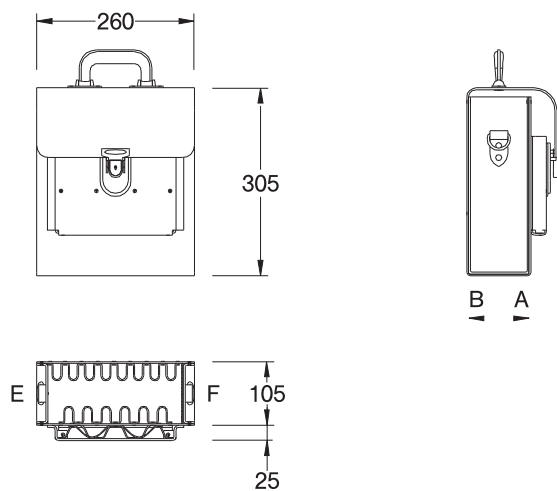



Description (without tools)	Order ref.	Length	Width	Height	
Carrying Bag for Belts and Harness	712165	220	130	300	0,3 kg

## Shoulder and Carrying Bag Universal

- Material: smooth black leather, top quality cowhide leather(vegetable tanning)
- Partitions for standard tools
- Shoulder Strap
- 4 separate compartments
- Quick lock buckle

► “Designed to take the complete tool set Monteur 733301 (see page 159)

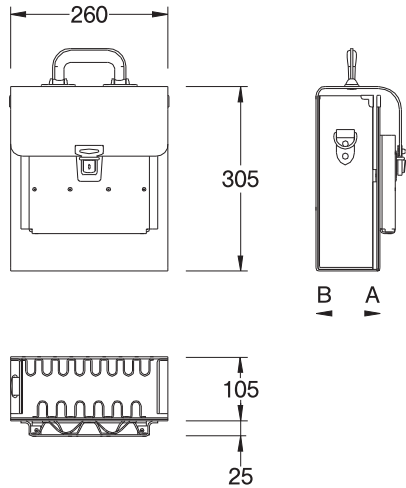


Description (without tools)	Order ref.	Length	Width	Height	
Shoulder and Carrying Bag, black,empty	733302	260	130	305	1.5 kg
Shoulder and Carrying Bag, red,empty	733303	260	130	305	1.5 kg

## Shoulder and Carrying Bag

### Universal

- Material: smooth top quality cowhide leather (vegetable tanning)
- Partitions for standard tools
- Shoulder Strap
- 4 separations in the compartment
- Front side tiltable
- Quick lock buckle

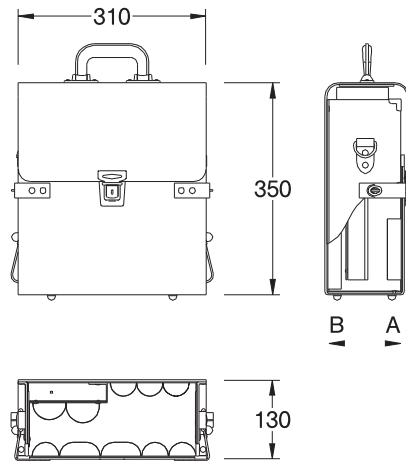


733309  
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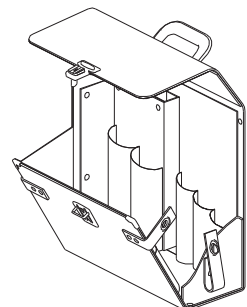
Description (without tools)	Order-ref.	Length	Width	Height	
Shoulder and carrying bag	733309	260	130	305	1.5 kg

## Shoulder- and Carrying Bag for meter reader

- Material: smooth top quality-cowhide leather (vegetable tanning)
- Half size folding fronth, front side tiltable
- Compartment on back for test device
- Shoulder Strap
- Quick lock buckle
- Partitions for
  - 1 Engineers pliers
  - 1 Side cutter
  - 1 Insulation stripper
  - 1 Lead sealing pliers
  - 4 Screwdriver
  - 2 Nut spinner
  - Gloves



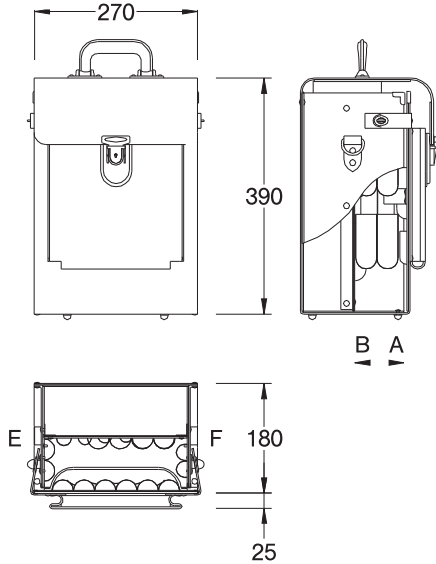
733315  
Computer graphic



Description (without tool)	Order ref.	Length	Width	Height	
Bag for meter reader, empty	733315	310	130	350	1.8 kg

## Shoulder and Carrying Bag

- Material: smooth top quality cowhide leather (vegetable tanning)
- Partitions for standard tools
- Large compartment for measuring instrument, gloves, protective sleeve
- Front side tiltable
- Compartment on the frontside
- Shoulder strap
- Quick lock buckle

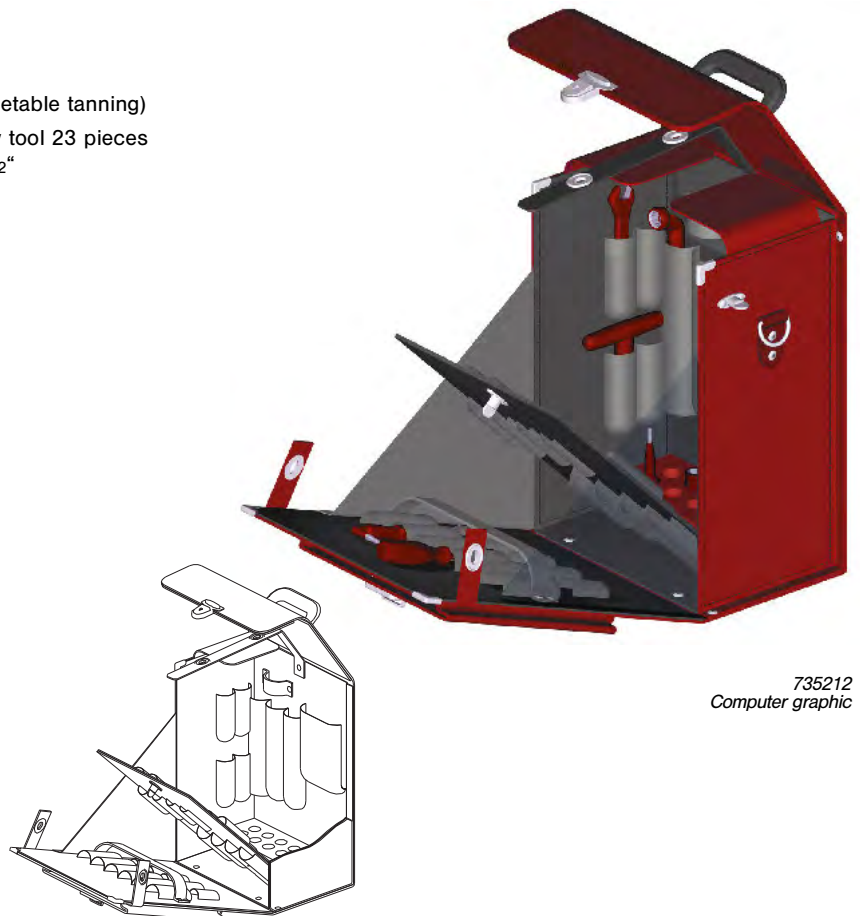
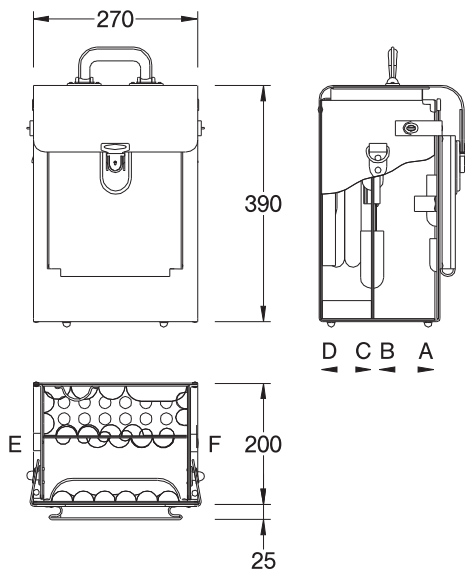


735111  
Computer graphic

Description (without tools)	Order ref.	Length	Width	Height	
Shoulder and Carrying Bag, System, empty	735111	270	205	390	3120

## Shoulder and Carrying Bag

- Material: smooth top quality cowhide leather (vegetable tanning)
- Partitions for standard tools 20 pieces and screw tool 23 pieces
- Large compartment for ratchet lever set  $\frac{3}{8}$ " or  $\frac{1}{2}$ "
- Front and middle side tiltable
- Compartment on the frontside
- Shoulder strap
- Quick lock buckle



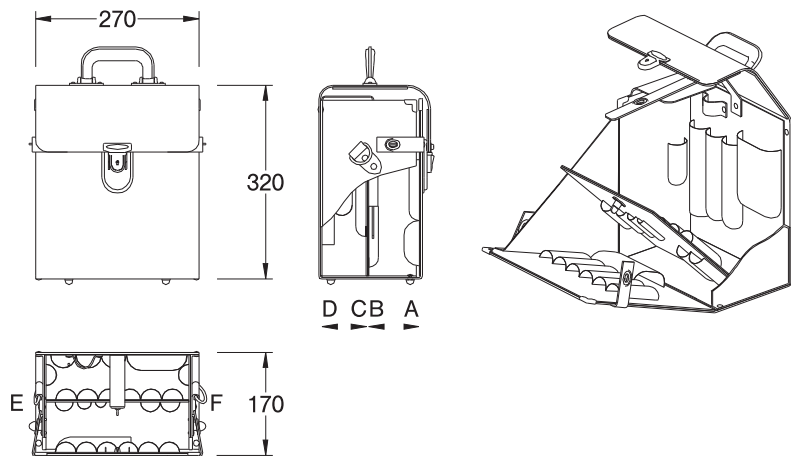
735212  
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Description (without tools)	Order ref.	Length	Width	Height	
Shoulder and Carrying Bag, System, empty	735212	270	225	390	3120

## Shoulder and Carrying Bag System

- Material: smooth first quality-cowhide leather (vegetable tanning)
- Partitions for standard tools 20 pieces and screw tool 23 pieces
- Large Compartment for ratchet lever set  $\frac{3}{8}$ " or  $\frac{1}{2}$ "
- Quick lock buckle
- Shoulder strap
- Quick lock buckle

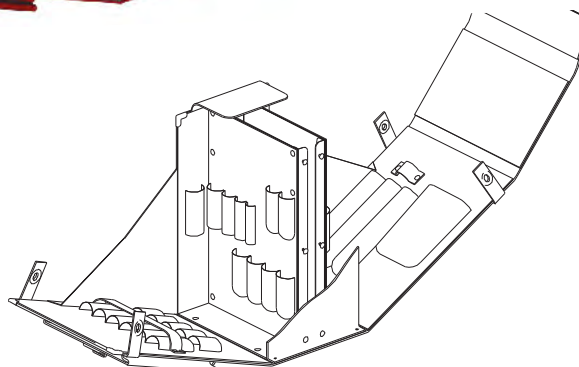
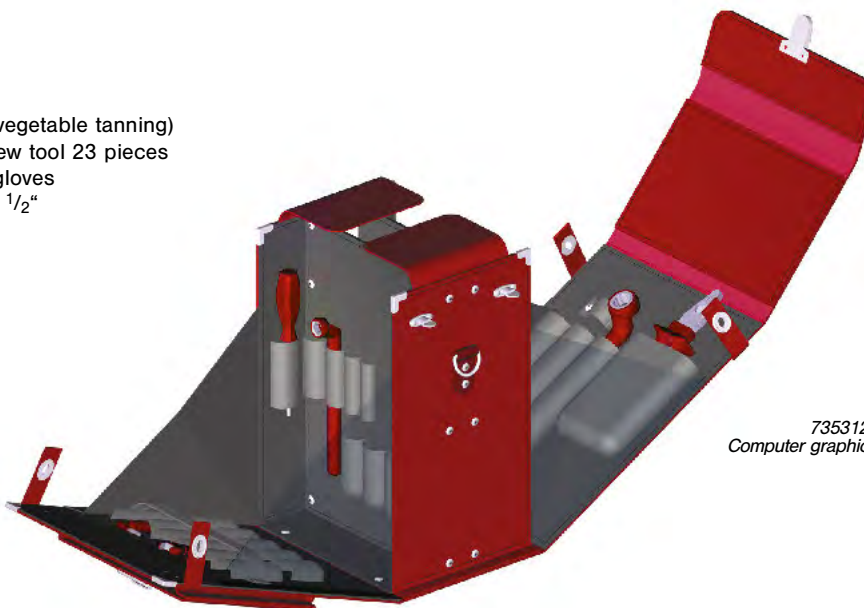
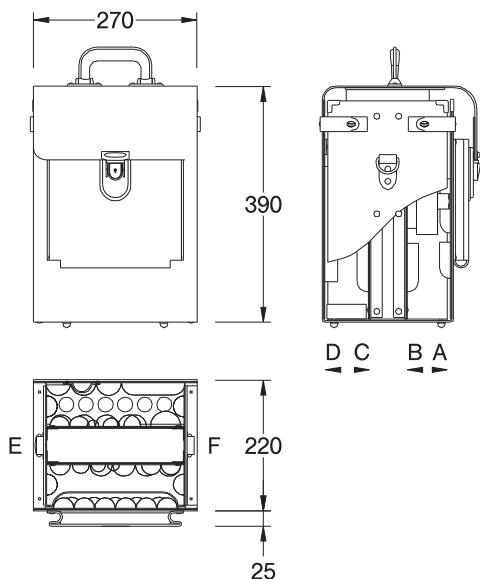
► Designed to take the complete tool set Monteur 733301 (see page 159)



Description (without tools)	Order ref.	Length	Width	Height	
Shoulder- and Carrying Bag, System, empty	735222	270	170	320	3.6 kg

## Shoulder and Carrying Bag System

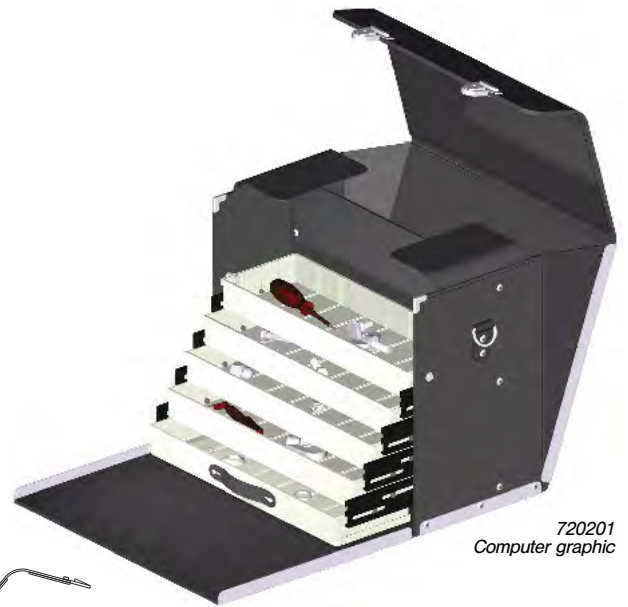
- Material: smooth first quality-cowhide leather (vegetable tanning)
- Partitions for standard tools 20 pieces and screw tool 23 pieces
- Large compartment for measuring instrument, gloves
- Large Compartment for ratchet lever set  $\frac{3}{8}$ " or  $\frac{1}{2}$ "
- Front, middle and back side tiltable
- Front-compartment
- Shoulder strap
- Quick lock buckle



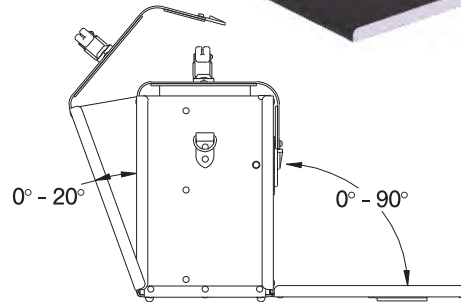
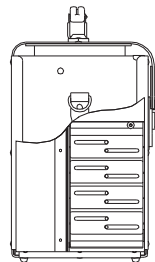
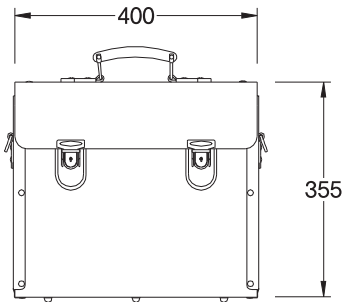
Description (without tools)	Order ref.	Length	Width	Height	
Shoulder and Carrying Bag, System, empty	735312	270	245	390	3120

### Tool case

- Material: smooth top quality-cowhide leather (vegetable tanning)
- Two inside walls and five drawers
- Partition to subdivide the drawer
- Large compartment for measuring instrument, gloves
- Aluminium edges on sides
- Backside tiltable
- Six castors
- Shoulder strap
- Two quick lock buckles
- Case suitable for shoulder carrying



720201  
Computer graphic

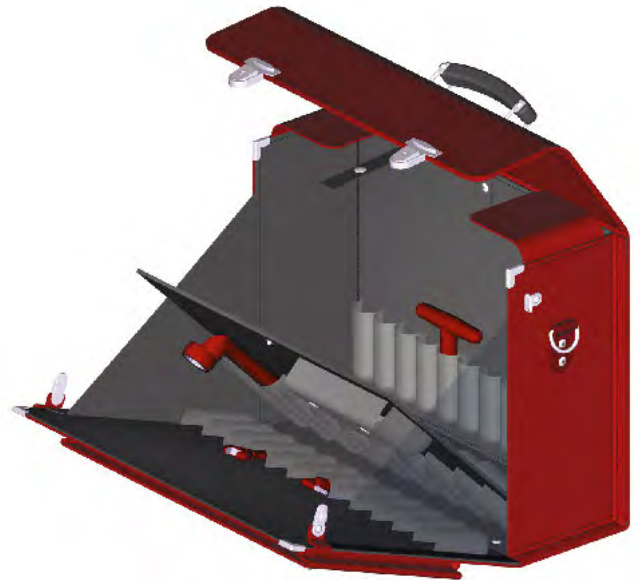


Description (without tools)	Order ref.	Length	Width	Height	
Tool case, black, empty	720201	400	225	355	5.9 kg

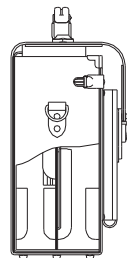
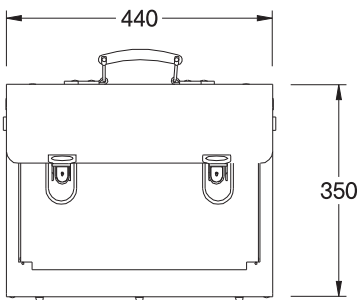
### Tool case

- Material: smooth top quality-cowhide leather (vegetable tanning)
- Front and middle side tiltable
- Front compartment
- Shoulder strap
- Five castors
- Two quick lock buckles

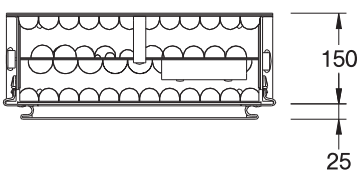
- ▶ Designed to take the complete tool set "Training and continuing" (see page 164) "Industry I" (see page 170)




734004  
Computer graphic



D CB A

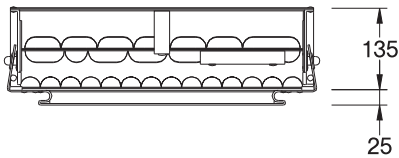
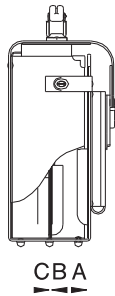
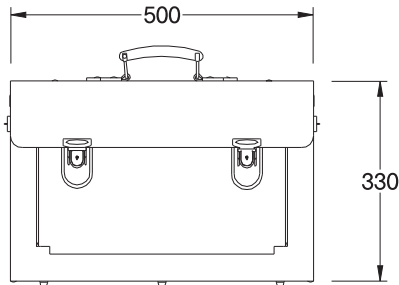


Description (without tools)	Order ref.	Length	Width	Height	
Tool case, black, empty	734002	440	175	350	4 kg
Tool case, red, empty	734004	440	175	350	4 kg

### Tool case

- Material: smooth top quality cowhide leather (vegetable tanning)
- Two inside walls, tiltable
- Front and middle side tiltable
- Compartment for documents
- Five castors
- Two quick lock buckles

▶ Designed to take the complete "Universal" tool set (see page 169)



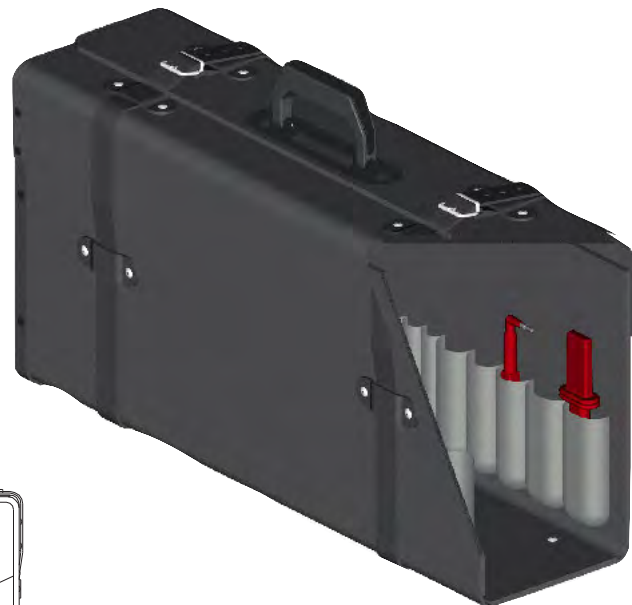
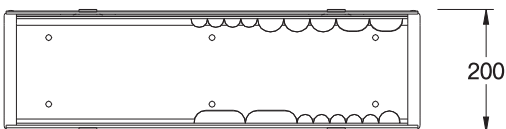
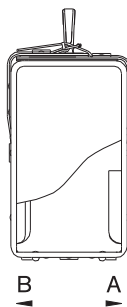
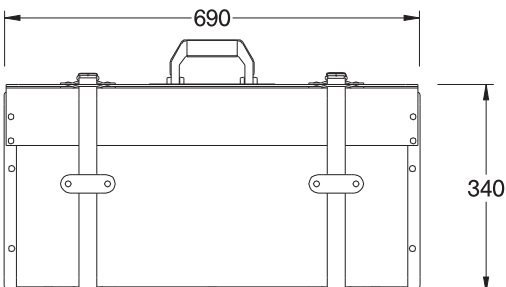
735002  
Computer graphic

Description (without tools)	Order ref.	Length	Width	Height	⚖️
Tool case, red, empty	735002	500	160	330	3650

### Tool case

- Material: smooth top quality cowhide leather (vegetable tanning)
- Case can be opened only on top side (not tiltable)
- Rotary belt
- Six castors

▶ Designed to take the complete tool set "cable assembly" (see page 176)



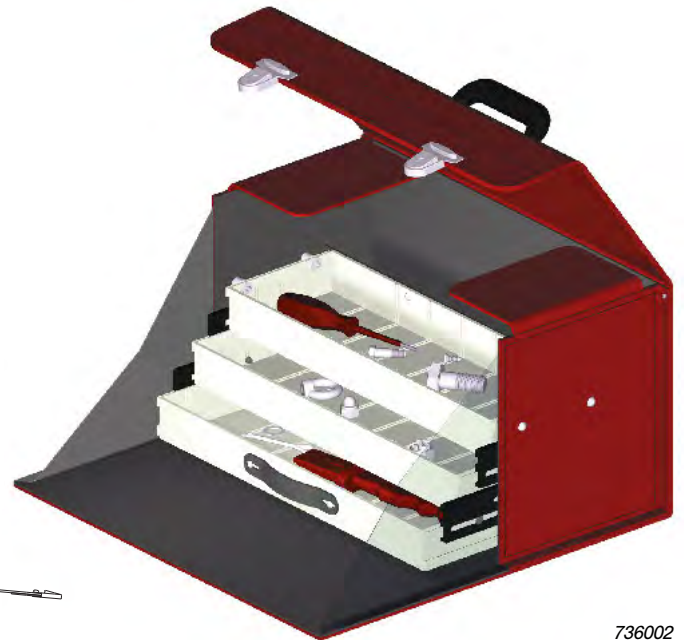
730002  
Computer graphic

Description (without tools)	Order ref.	Length	Width	Height	⚖️
Tool case, black, empty	730002	690	200	340	3.4 kg

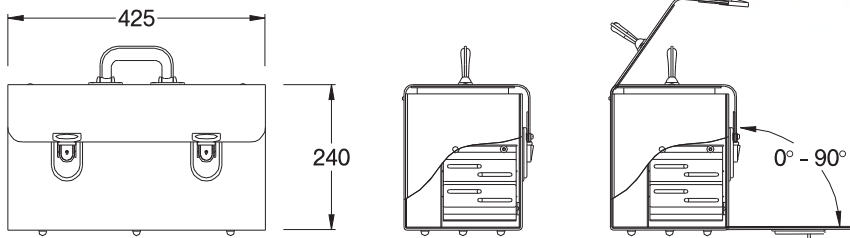
### Assortment Case

- Material: smooth top quality cowhide leather (vegetable tanning)
- Three drawers
- Partition to subdivide the drawer
- Front side tiltable
- Large compartment for measuring instrument, gloves
- Two quick lock buckles
- Five castors

► Designed to take the complete tool set "Protective Items" (see page 177)



736002  
Computer graphic

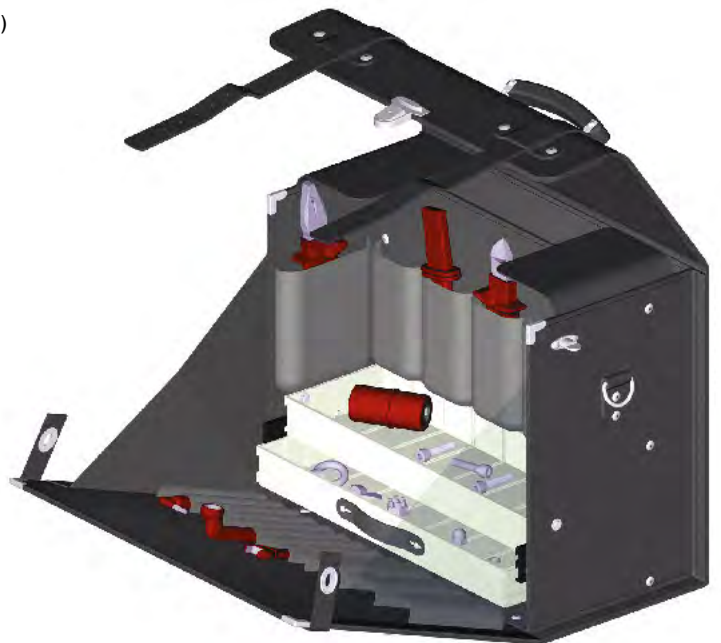


Description (without tools)	Order ref.	Length	Width	Height	
Assortment case, red, empty	736002	425	195	240	3 kg

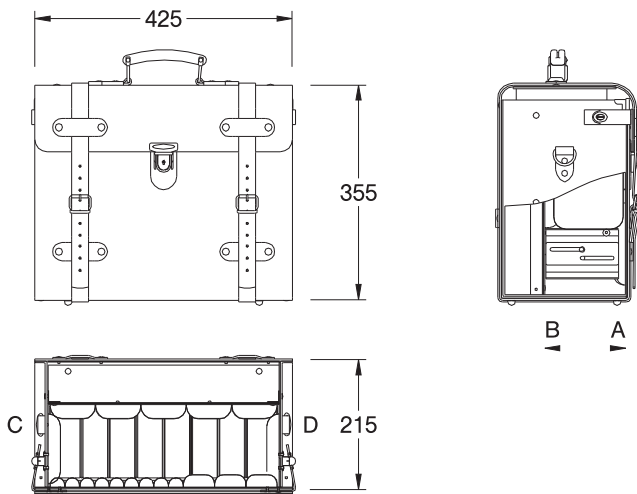
### Assembly Case

- Material: smooth top quality cowhide leather (vegetable tanning)
- Two drawers
- Partition to subdivide the drawer
- Large compartment for measuring instrument, gloves
- Front side tiltable
- Two rotary belts and a quick lock buckle

► Designed to take the complete tool set "Meter III" (see page 167)



737102  
Computer graphic



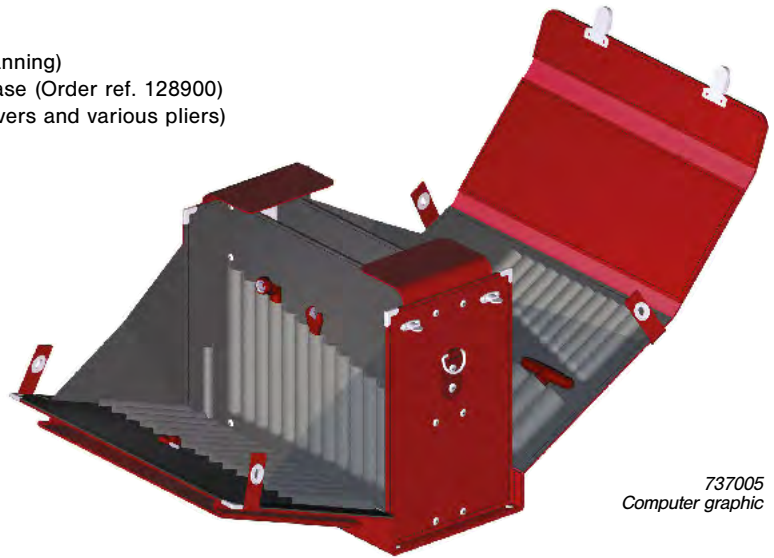
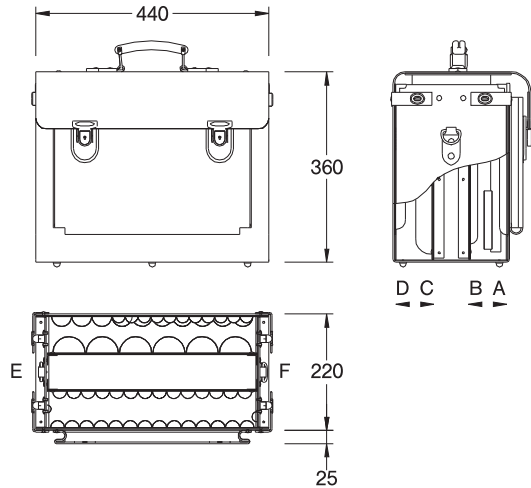
Description (without tools)	Order ref.	Length	Width	Height	
Assembly case, black, empty	737102	425	215	355	5 kg
Assembly case, red, empty	737112	425	215	355	5 kg



## Tool case

- Material: smooth top quality-cowhide leather (vegetable tanning)
- Center compartment suitable to accommodate hard top case (Order ref. 128900)
- Partitions for standard tools 13 pieces (spanner, screwdrivers and various pliers)
- Front and middle side tiltable
- Front compartment for documents
- Shoulder strap
- Two quick lock buckles

► Designed to take the complete tool set "Industry III" (see page 172)

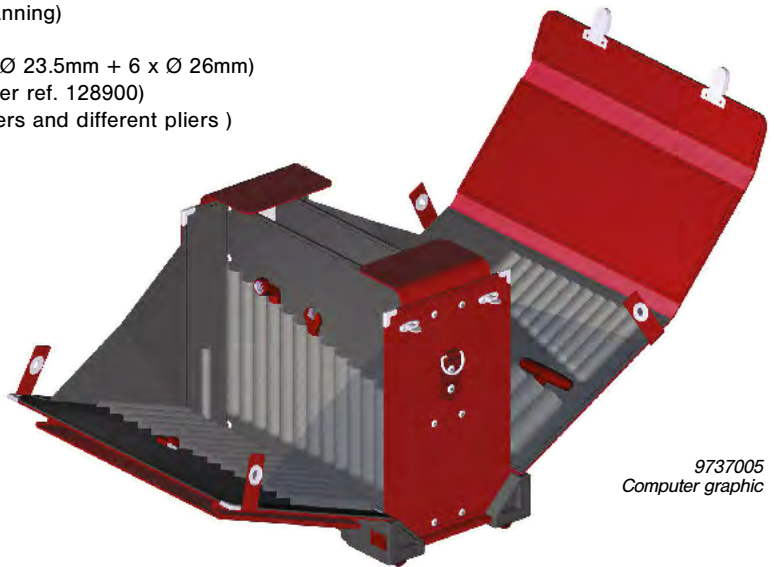
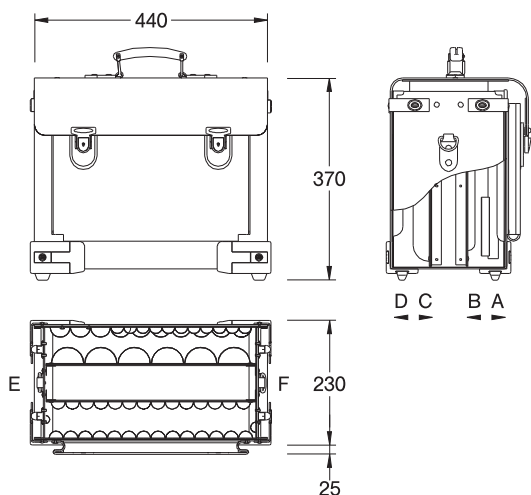


737005  
Computer graphic

Description (without tools)	Order ref.	Length	Width	Height	
Tool case, red, empty	737005	440	245	360	4 kg

## Tool case with plastic edges

- Basic model 737005
- LEMP-plastic edges
- Material: smooth top quality-cowhide leather (vegetable tanning)
- Floor pan made of aluminium sheet; 3.5cm kick up
- Foam padding in the front bottom to take 12 sockets (6 x Ø 23.5mm + 6 x Ø 26mm)
- Fixed partition in the middle, to take the plastic case (Order ref. 128900)
- Partitions for standard tools 13 piece( spanner, screwdrivers and different pliers )
- Front and middle side tiltable
- Front compartment for documents
- Shoulder strap
- Two quick lock buckles



9737005  
Computer graphic

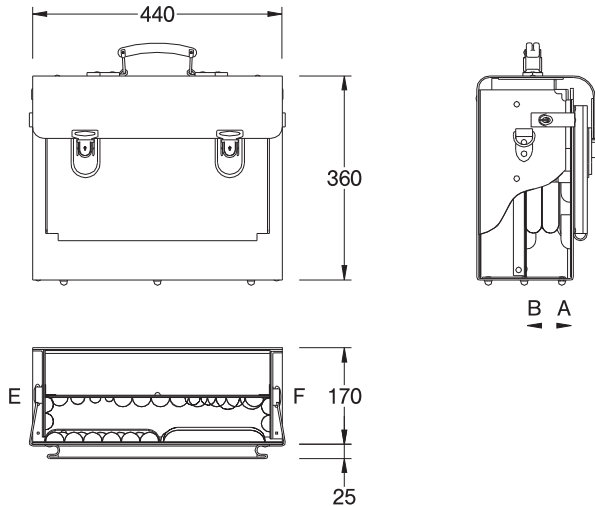
Description (without tools)	Order ref.	Length	Width	Height	
Tool case with plastic edges, red, empty	9737005	440	250	370	5.8 kg

## Tool case


### System

- Material: smooth top quality cowhide leather (vegetable tanning)
- Partitions for standard tools
- Large compartment for measuring instrument, gloves
- Front side tiltable
- Front compartment for documents
- Shoulder strap
- Two quick lock buckles

- ▶ Designed to take the complete tool set  
 "Meter II" (see page. 166)  
 "Distribution" (see page 168)



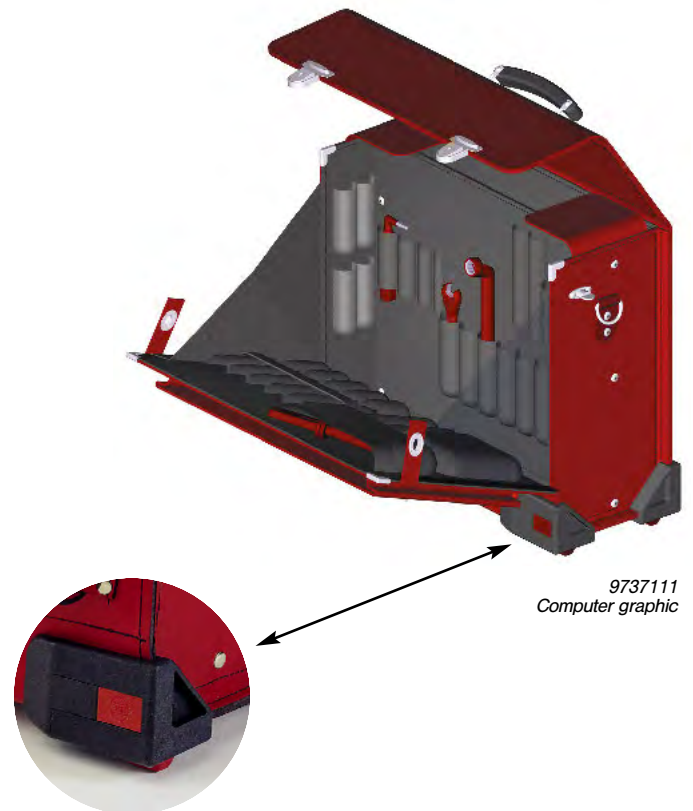
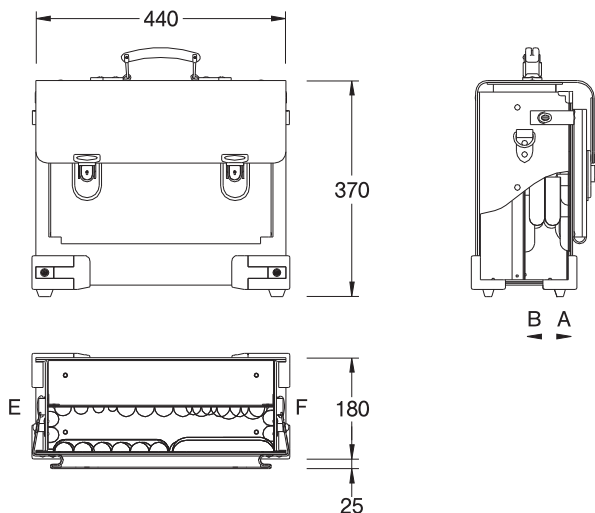
737111  
Computer graphic

Description (without tools)	Order ref.	Length	Width	Height	
Tool case System, red, empty	737111	440	195	360	4 kg


## Tool case

### with plastic edges

- Basic model 737111
- LEMP-plastic edges
- Material: smooth top quality cowhide leather (vegetable tanning)
- Foam padding in the front bottom to take 12 sockets
- Partitions for standard tools
- Large compartment for measuring instrument, gloves, protective
- Front side tiltable
- Front compartment for documents
- Shoulder strap
- Two quick lock buckles

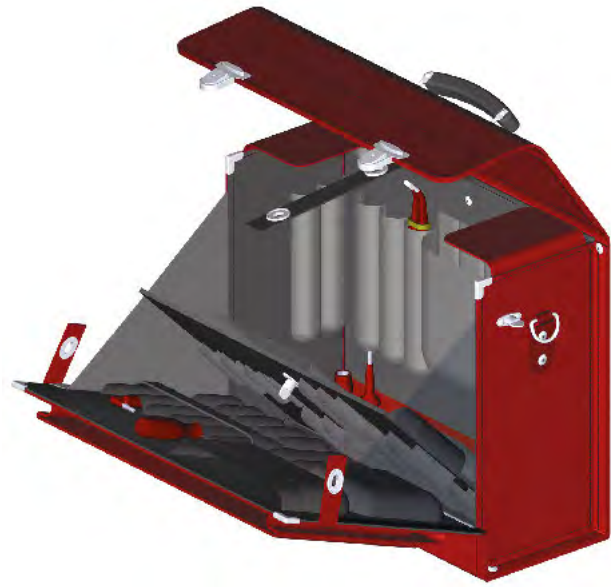
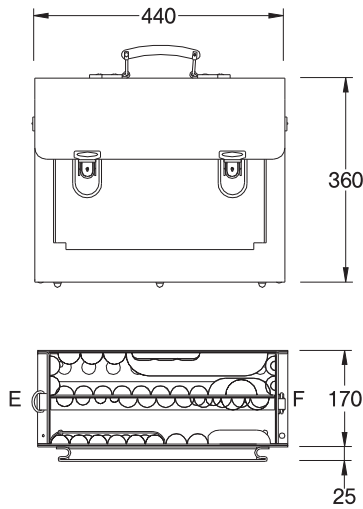


9737111  
Computer graphic

Description (without tools)	Order ref.	Length	Width	Height	
Tool case , with plastic edges	9737111	440	205	370	4.5 kg

## Safety Case System

- Material: smooth top quality cowhide leather (vegetable tanning)
- Partitions for standard tools 20 pieces and screw tool 23 pieces
- Partition for ratchet lever set  $\frac{3}{8}$ " or  $\frac{1}{2}$ "
- Front and middle side tiltable
- Front compartment for documents
- Shoulder strap
- Two quick lock buckles

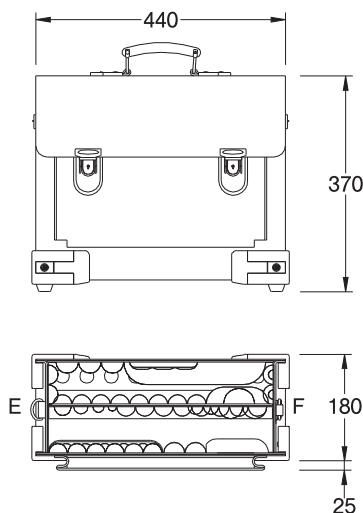


737212  
Computer graphic

Description (without tools)	Order ref.	Length	Width	Height	
Tool case, red, empty	737212	440	195	360	4 kg

## Tool Case with plastic edges

- Basic model 737212
- LEMP-plastic edges
- Material: smooth top quality-cowhide leather (vegetable tanning)
- Base made of aluminium sheet; side depth 3,5cm
- Foam padding on the ground of the front partition for 12 socket spanner insert (6 x  $\varnothing$  23.5mm + 6 x  $\varnothing$  26mm)
- Partitions for standard tools 20 pieces and screw tool 23 pieces
- Partition for ratchet lever set  $\frac{3}{8}$ " or  $\frac{1}{2}$ "
- Front and middle side tiltable
- Front compartment for documents
- Shoulder strap
- Two quick lock buckles



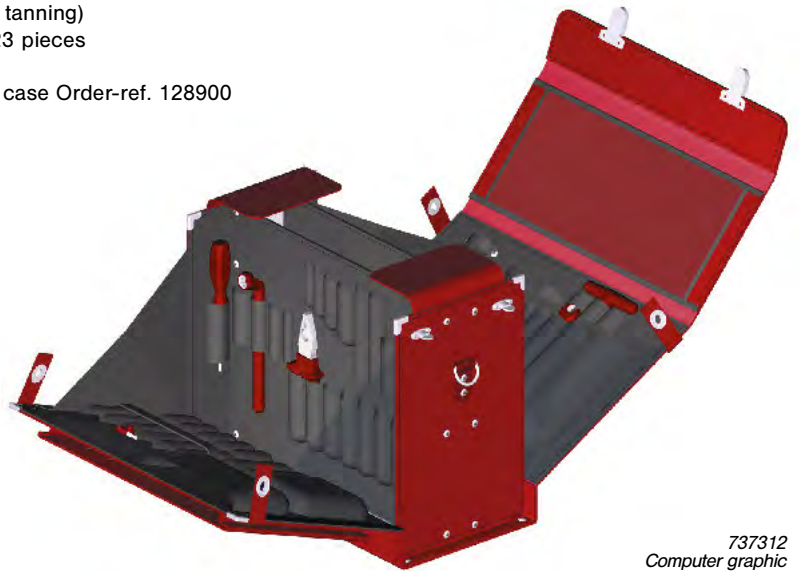
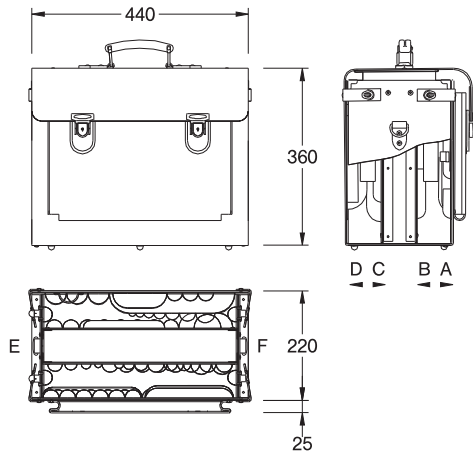
9737212  
Computer graphic

Description (without tools)	Order ref.	Length	Width	Height	
Tool case , with plastic edges, red	9737212	440	205	370	4.5 kg
Tool case , with plastic edges, black	9737213	440	205	370	4.5 kg

## Tool Case

- Material: smooth top quality cowhide leather (vegetable tanning)
- Partitions for standard tools 20 pieces and screw tool 23 pieces
- Partition for ratchet lever set  $\frac{3}{8}$ " or  $\frac{1}{2}$ "
- Large compartment for measuring instrument or plastic case Order-ref. 128900
- Front and back side tiltable
- Front compartment for documents
- Shoulder strap
- Two quick lock buckles

- ▶ Designed to take the complete tool set  
 "Industry II" (see page 166)  
 "Power supply" (see page 175)

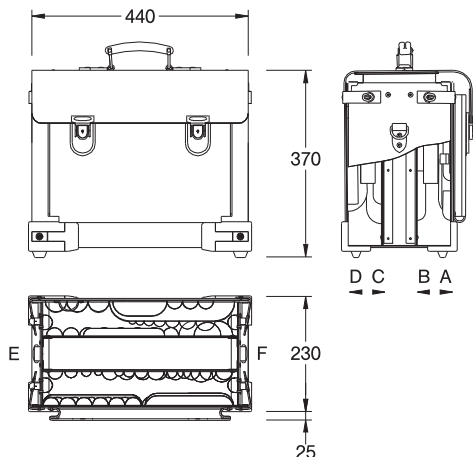


737312  
Computer graphic

Description (without tools)	Order-ref.	Length	Width	Height	⚖️
Tool case- System, red, empty	737312	440	245	360	5.3 kg

## Tool Case with plastic edges

- Standard model 737312
- LEMP-plastic edges
- Material: smooth top quality-cowhide leather (vegetable tanning)
- Base made of aluminium sheet; side depth 3.5cm
- Foam padding on the ground of the front partition for 12 socket spanner insert (6 x Ø 23.5mm + 6 x Ø 26mm)
- Partitions for standard tools 20 pieces and screw tool 23 pieces
- Partition for ratchet lever set  $\frac{3}{8}$ " or  $\frac{1}{2}$ "
- Large compartment for measuring instrument or plastic case Order-ref. 128900
- Front and back side tiltable
- Front compartment for documents
- Shoulder strap
- Two quick lock buckles



Picture with sample equipment




Description (without tools)	Order ref.	Length	Width	Height	⚖️
Tool , with plastic edges, red	9737312	440	255	370	5.8 kg

**Hard Top Case**  
made of ABS

- Case hinge type, black
- With two partitions, one is detachable
- Two partitions with many
- With four castors on one side
- Plastic base plate with variable slots
- Spring lock



*Picture with sample equipment*

Description (without tools)	Order ref.	Length	Width	Height	
Hard Top Case, black, empty	729001	470	130	310	5.5 kg




*Picture with sample equipment*

**Hard Top Case**

- Vacuum moulded and with anti-corrosive aluminium profile
- Inside case of impact resistant "Polystyrol" with partitions
- Adjustable compartment for documents
- Two locks
- Two partitions with several sections



*Order ref. 729500*

Description (without tools)	Order-ref.	Length	Width	Height	
Hard Top Case, black, empty	729600	460	200	400	5 kg

## Belt Pouch "EuroMario"



Description (without tools)	Order ref.	INT Id.	Length	Width	Height	
Belt Pouch "EuroMario" red empty	711021	1912 0	110	220	65	each 90
Belt Pouch "EuroMario" black empty	711026	1913 0	120	230	70	each 130

Description	Order-ref.	INT Id.	Length	Width	Height	
Belt Pouch "EuroMario" Set red	711020	1912 2	110	220	65	each 620
Belt Pouch "EuroMario" Set black	711025	1913 2	120	230	70	each 640

consisting of:

Description	Order-ref.
Engineers Pliers 180mm 2K	21631801
Flat bladed Screwdriver 0.5 x 3 x 100mm	2111331
Flat bladed Screwdriver 0.8 x 4 x 100mm	2111340

Description	Order-ref.
Cross Point - Screwdriver "Phillips" PH1 x 75	2113301
Electricians Scissors 2K	272012

## Belt Pouch "IperMario"



Description (without tools)	Order ref.	INT Id.	Length	Width	Height	
Belt Pouch "IperMario" empty	711029	1915 0	245	245	50	each 300

Description	Order ref.	INT Id.	Length	Width	Height	
Belt Pouch "IperMario" Set	711030	1915 2	245	245	50	each 1200

consisting of:

Description	Order-ref.
Engineers Pliers 180mm 2K	21631801
Side Cutter 2K	23631601
Flat bladed Screwdriver 1,0 x 5,5x 125mm	2111355
Flat bladed Screwdriver 0,8 x 4 x 100mm	2111340

Description	Order-ref.
Cross Point - Screwdriver "Phillips" PH2 x 100	2113302
Cross Point - Screwdriver "Pozidriv" PZ2 x 100	2114302
Electricians Scissors 2K	272012
Voltage Tester 3 x 60mm	010302

## Nut Spinner Set for hex. nut spinner - Futur II



Description	Order ref.	INT Id.	Length	Width	Height	
Nut Spinner-Set - Futur II	111503	1399 010	270	195	35	1300

consisting of:

Description	Order ref.	Description	Order ref.
1 Nut Spinner - Size 4	2136304	1 Nut Spinner - Size 9	2136309
1 Nut Spinner - Size 5	2136305	1 Nut Spinner - Size 10	2136310
1 Nut Spinner - Size 5.5	2136355	1 Nut Spinner - Size 11	2136311
1 Nut Spinner - Size 6	2136306	1 Nut Spinner - Size 12	2136312
1 Nut Spinner - Size 7	2136307	1 Nut Spinner - Size 13	2136313
1 Nut Spinner - Size 8	2136308		

## Screwdriver Set for hex. socket sets - Futur II



Description	Order ref.	INT Id.	Length	Width	Height	
Screwdriver-Set - Futur II	111504	1399 011	290	165	35	650

consisting of:

Description	Order ref.	Description	Order ref.
1 Screwdriver - Size 2	2115302	1 Screwdriver - Size 5	2115305
1 Screwdriver - Size 2.5	2115325	1 Screwdriver - Size 6	2115306
1 Screwdriver - Size 3	2115303	1 Screwdriver - Size 8	2115308
1 Screwdriver - Size 4	2115304		

## Ball End hexagon Screwdriver Set - Futur II



Description	Order ref.	INT Id.	Length	Width	Height	
Ball end hexagon-Screwdriver-Set - Futur II	111505	1399 012	290	165	35	700

consisting of:

Description	Order-ref.	Description	Order ref.
1 Ball end Screwdriver - Size 2	2110320	1 Ball end Screwdriver - Size 5	2110350
1 Ball end Screwdriver - Size 2,5	2110325	1 Ball end Screwdriver - Size 6	2110360
1 Ball end Screwdriver - Size 3	2110330	1 Ball end Screwdriver - Size 8	2110380
1 Ball end Screwdriver - Size 4	2110340		

# TORX® -Screwdriver-Set - Futur II



Description	Order-ref.	INT-Id.	Length	Width	Height	
TORX Screwdriver Set Futur II	111506	1399 013	290	165	35	450

consisting of:

Description	Order ref.
1 Torx Screwdriver - Size 10	2110510
1 Torx Screwdriver - Size 15	2110515
1 Torx Screwdriver - Size 20	2110520

Description	Order ref.
1 Torx Screwdriver - Size 25	2110525
1 Torx Screwdriver - Size 30	2110530

## Tool case "EuroNorm"

- Can be used down to -40°C, with exception of Cable Knife 281500



Description	Order ref.	INT Id.	Length	Width	Height	
Tool Case "EuroNorm" empty	730151	1923 0	240	270	50	each 960

Description	Order ref.	INT Id.	Length	Width	Height	
Tool Case "EuroNorm" Set	730150	1923 1	240	270	50	-

consisting of:

Description	Order ref.
Engineers Pliers 180mm 2K	21631801
Telephone pliers straight 160mm 2K	22531601
Flat bladed screwdriver 0.5 x 3 x 100mm	2111331
Flat bladed screwdriver 0.8 x 4 x 100mm	2111340
Flat bladed screwdriver 1.2 x 6,5 x 150mm	2111365
Cross point screwdriver "Phillips" PH1 x 75	2113301

Description	Order ref.
Cross point screwdriver "Phillips" PH2 x 100	2113302
Cross point screwdriver "Pozidriv" PZ1 x 75	2114301
Cross point screwdriver "Pozidriv" PZ2 x 100	2114302
Cable Knife	281500
Insulated electricians scissors 2K	272020
Cable Cutter D17 2K	254317

**Safety Tool Set Electric  
in folding case**

- Folding case made of sail cloth
- Rotary straps



Description (without tools)	Order ref.	Length	Width	⚖️
Folding case made of sail cloth, empty	730003	790	360	440

Description (Set)	Order ref.	⚖️
Safety Tool Set Electric	730013	1960

consisting of:

Description	Order ref.	Description	Order ref.
Folding case (Sail cloth)	730003	Nutspinner 9.0 mm	136509
Side Cutter 160 mm	236316	Nutspinner 10.0 mm	136510
Engineers Pliers 180 mm	216318	Screwdriver 0.6 x 2.8 x 75 mm	111528
Round nosed pliers 160 mm	218316	Screwdriver 0.6 x 3.5 x 100 mm	111535
Insulation Stripper 165 mm	271316	Screwdriver 0.8 x 4.0 x 100 mm	111540
Cable Knife with integrated blade guard	281300	Screwdriver 1.0 x 5.5 x 125 mm	111555
Flat Nosed Pliers (plastic), long jaws	217918	Screwdriver 1.2 x 6.5 x 125 mm	111565
Nutspinner 7.0 mm	136507	Push on cover 40 x 6 mm, transparent (10 pieces)	645004
Nutspinner 8.0 mm	136508	Push on cover 10 x 100mm with boot (10 pieces)	646010

## Safety Tool Set "Repair I" in Folding Case

- Made of imitation leather
- With holder for gloves



Description (without tools)	Order ref.	Length	Width	
Folding Case, (without tools)	731302	430	400	⚖️ 440

Description (Set)	Order ref.	
Safety Tool Set Repair I	731001	⚖️ 1960

consisting of:

Description	Order ref.
Folding Case black	731302
Side cutter 160 mm	236316
Engineers pliers 180 mm	216318
Cable knife with safety cap	281300
Cable stripping knife with safety cap	244300
Open end spanner 10 mm VDE	151310
Open end spanner 11 mm VDE	151311
Open end spanner 12 mm VDE	151312

Description	Order ref.
Open end spanner 13 mm VDE	151313
Open end spanner 14 mm VDE	151314
Open end spanner 17 mm VDE	151317
Open end spanner 19 mm VDE	151319
Screwdriver 0.6 x 2.8 x 75 mm	111528
Screwdriver 0.8 x 4.0 x 100 mm	111540
Screwdriver 1.0 x 5.5 x 125 mm	111555
Electrical safety gloves Class 0 Size 10	631520

## Safety Tool Set “Repair I” in Folding Case

- Made of imitation leather
- With holder for gloves
- Partition for tools
- Cases can be locked



Description (without tools)	Order ref.	Length	Width	⚖️
Folding Case, (without tools)	732302	770	435	630

Description (Set)	Order ref.	⚖️
Safety Tool Set “Repair II”	732301	3400


consisting of:


Description	Order ref.	Description	Order ref.
Folding Case	732302	Socket spanner insert 19 mm <sup>3</sup> / <sub>8</sub> “ normal hex.	130219
Side cutter 160 mm	236316	Nut spinner 8.0 mm insulated	136508
Engineers pliers 180 mm	216318	Nut spinner 9.0 mm insulated	136509
Telephone pliers 200 mm	225320	Open end spanner 10 mm VDE	151310
Insulation stripper 165 mm	271316	Open end spanner 11 mm VDE	151311
Cable knife with safety cap	281300	Open end spanner 12 mm VDE	151312
Insulation removal knife with safety cap	244300	Open end spanner 13 mm VDE	151313
T-Shaped lever <sup>3</sup> / <sub>8</sub> “ with square end	125402	Open end spanner 14 mm VDE	151314
Socket spanner insert 10 mm <sup>3</sup> / <sub>8</sub> “ normal hex.	130210	Open end spanner 17 mm VDE	151317
Socket spanner insert 11 mm <sup>3</sup> / <sub>8</sub> “ normal hex.	130211	Open end spanner 19 mm VDE	151319
Socket spanner insert 12 mm <sup>3</sup> / <sub>8</sub> “ normal hex.	130212	Screwdriver 0.6 x 2.8 x 75 mm Square	111528
Socket spanner insert 13 mm <sup>3</sup> / <sub>8</sub> “ normal hex.	130213	Screwdriver 0.8 x 4.0 x 10 mm Square	111540
Socket spanner insert 14 mm <sup>3</sup> / <sub>8</sub> “ normal hex.	130214	Screwdriver 1.0 x 5.5 x 125 mm Square	111555
Socket spanner insert 17 mm <sup>3</sup> / <sub>8</sub> “ normal hex.	130217	Electrical gloves class 0 Size 10	631520

**Safety Tool Set “Assemblyman”  
in shoulder and carrying bag**

► Detailed technical description of the shoulder and carrying bag will be found on Page 141



Description (without tools)	Order ref.	Length	Width	Height	
Shoulder and carrying bag, black	733302	260	130	305	1.5 kg
Shoulder and carrying bag, red	733303	260	130	305	1.5 kg

Description (Set)	Order ref.	
Safety Tool Set Assemblyman	733001	3.7 kg

*consisting of:*

Description	Order ref.	Description	Order ref.
Shoulder and carrying bag	733302	Screwdriver 1.0 x 5.5 x 125 mm Square	111555
Side cutter 160 mm	236316	Nut spinner 7.0 mm	136507
Engineers pliers 200 mm	216320	Nut spinner 8.0 mm	136508
Telephone pliers 200 mm	225320	Nut spinner 9.0 mm	136509
Insulation stripper 165 mm	271316	Nut spinner 10.0 mm	136510
Cable knife with safety cap	281300	Electrical gloves class 0 size 10	631520
Screwdriver 0.6 x 2.8 x 75 mm Square	111528	Voltage Tester 100-500 Volt	01330001
Screwdriver 0.8 x 4.0 x 100 mm Square	111540		

## Tool case "EuroCompact"



Description (without tools)	Order ref.	INT Id.	Length	Width	Height	
Tool case "EuroCompact" without tools	729400	1917 0	430	340	160	each 3.2 kg

Description	Order ref.	INT Id.	Length	Width	Height	
Tool case "EuroCompact" Set	729410	1917 2	430	340	160	each 4.4 kg

consisting of:

Sortiment:

Description	Order ref.
Engineers pliers 180mm 2K	21631801
Telephone pliers 160mm 2K	22531601
Screwdriver tapered blade 0.5 x 3 x 100mm	2111331
Screwdriver tapered blade 0.8 x 4 x 100mm	2111340
Screwdriver tapered blade 1 x 5.5 x 125mm	2111355
Screwdriver tapered blade 1.2 x 6.5 x 150mm	2111365

Description	Order ref.
Cross head screwdriver "Phillips" PH1 x 75	2113301
Cross head screwdriver "Phillips" PH2 x 100	2113302
Cable cutter D17 2K	254317
Special electrician scissor 2K	272012
EnerGrip	530605
Switch cabinet spanner	12150401

## Tool case "Professional"



Description (without tools)	Order ref.	INT Id.	Length	Width	Height	
Tool case "Professional" Set	729430	1929 1	480	380	190	ca. 7.3 kg
Tool case "Professional" empty	729420	1929 0	480	380	190	ca. 4.7 kg


consisting of:

Description	Order ref.
Engineers pliers 180mm 2K	21631801
Telephone pliers grade	22532001
Screwdriver tapered blade 0.8 x 4 x 100mm	2111340
Screwdriver tapered blade 1 x 5.5 x 125mm	2111355
Screwdriver tapered blade 1.2 x 6.5 x 150mm	2111365
Cross head screwdriver "Phillips" PH1 x 75	2113301
Cross head screwdriver "Phillips" PH2 x 100	2113302
Cross head screwdriver "Pozidriv" PZ1 x 75	2114301
Cross head screwdriver "Pozidriv" PZ2 x 100	2114302
Cable CutterKabelschneider D17 2K	254317
Special electrician scissor 2K	272012

Description	Order ref.
Glovers "GRIP"	
Flexometer 3m	
Spirit level	
Hexagon screw set "Pocketstar"	
Universal knife	
Switch cabinet spanner "ProfiKey"	
Voltage tester 3 x 60mm	
Pocket saw "PUK"	
Hammer 300g	
Waterpump Pliers	

## Tool case "Alu"



Description	Order ref.	INT Id.	Length	Width	Height	
Tool case "Alu" Set	729710	1928 1	485	360	200	each 9 kg
Tool case "Alu" (without tools)	729700	1928 0	485	360	200	each 6.1 kg

consisting of:

Description	Order ref.
Engineers pliers 180mm 2K	21631801
Telephone pliers 200mm 2K	22532001
Screwdriver tapered blade 0,8 x 4 x 100mm	2111340
Screwdriver tapered blade 1 x 5,5 x 125mm	2111355
Screwdriver tapered blade 1,2 x 6,5 x 150mm	2111365
Cross head screwdriver "Phillips" PH1 x 75	2113301
Cross head screwdriver "Phillips" PH2 x 100	2113302
Cross head screwdriver "Pozidriv" PZ1 x 75	2114301
Cross head screwdriver "Pozidriv" PZ2 x 100	2114302
Cable Cutter D17 2K	254317
Cable knife	281500
Special electrician scissor 2K	272012


Sortiment:

Description	Order ref.
Measuring tape 3m	
Spirit level 250mm	
Mini Spirit level	
Hexagon screw set "Pocketstar"	
Universal knife	
Switch cabinet spanner	
Voltage Tester 3 x 60mm	
Pocket saw "PUK"	
Hammer 300g	
Chisel	
Water pump pliers	

## Safety Tool Set in Plastic Case

- Plastic case, ABS, black



Description	Order ref.	Length	Width	Height	
Safety Tool Set in Plastic Case	750040	610	410	140	7.7 kg

consisting of:

Description	Order ref.
Plastic case , without foam padding	750010
Foam Padding for case 750010	750011
Engineers pliers 200 mm	216320
Waterpump pliers 260 mm	292626
Round cable cutter VDE Cu/Al 35 mm <sup>2</sup> max.	254316
Cable shears saw, insulated	430302
Ratchet lever 3/8" VDE	131338
Extension piece 3/8" 125 mm	132412
T-Shaped lever 3/8" Universal	125802
Four arm nut wrench 4 x 3/8" with square end	121400
Cable knife with replaceable blade	281500
Special cable knife	288700
Socket Spanner Insert 10 mm 3/8" normal hex.	130210
Socket Spanner Insert 12 mm 3/8" normal hex.	130212
Socket Spanner Insert 13 mm 3/8" normal hex.	130213

Description	Order ref.
Socket Spanner Insert 14 mm 3/8" normal hex.	130214
Socket Spanner Insert 17 mm 3/8" normal hex.	130217
Socket Spanner Insert 19 mm 3/8" normal hex.	130219
Socket Spanner Insert 20 mm 3/8" normal hex.	130220
Socket Spanner Insert 21 mm 3/8" normal hex.	130221
Socket Spanner Insert 22 mm 3/8" normal hex.	130222
Open end spanner 10 mm insulated VDE	151310
Open end spanner 12 mm insulated VDE	151312
Open end spanner 14 mm insulated VDE	151314
Open end spanner 17 mm insulated VDE	151317
Open end spanner 19 mm insulated VDE	151319
Screwdriver 0.8 x 4.0 x 100 mm square handle	111540
Screwdriver 1.0 x 5.5 x 125 mm square handle	111555
Screwdriver 1.2 x 8.0 x 175 mm square handle	111580
Wedge plastic without groove, grey	652001

**Tool Set Terminals Assembly  
in Plastic Case**



Tool Set Terminal Assembly I  
Order ref. 128325



Tool Set Terminal Assembly II  
Order ref. 128340

Description (Set)	Order ref.	⚖️
Tool Set Terminal Assembly I	128325	2600
Tool Set Terminal Assembly II	128340	2740

Terminal Assembly I consisting of:

Description	Order ref.
Plastic Case red without foam padding	128900
Foam padding Terminal Assembly I	128905
Ratchet lever 3/8" VDE	131338
Light hammer Size1/25, non rebound, insulated	410322
Extension Piece 3/8" with auto.locking system 125 mm	132412
Extension Piece 3/8" with auto.locking system 250 mm	132425
Socket spanner insert 13 mm 3/8" normal hex.	130213
Socket spanner insert 17 mm 3/8" normal hex.	130217
Socket spanner insert 19 mm 3/8" normal hex.	130219
Allen Key Socket 5.0 x 85 mm 3/8" for hex. socket	140305
Allen Key Socket 6.0 x 85 mm 3/8" for hex. socket	140306
Allen Key Socket 8.0 x 85 mm 3/8" for hex. socket	140308
Allen Key Socket 10.0 x 85 mm 3/8" for hex. socket	140310
Allen Key Socket 5.0 x 125 mm 3/8" for hex. socket	140105
Angel screwdriver 5mm , insulated	116305
Angel screwdriver 6mm , insulated	116306
Screwdriver 0,6 x 2,8 x 75 mm	111528
Wedge plastic spez. 20 x 170mm, red	652003

Terminal Assembly II consisting of:

Description	Order ref.
Plastic Case red without foam padding	128900
Foam padding Terminal Assembly II	128910
Engineers pliers 200 mm	216320
Side cutter 180 mm	236318
Ratchet lever 3/8" VDE	131338
Extension Piece 3/8" with auto.locking system 125 mm	132412
Extension Piece 3/8" with auto.locking system 250 mm	132425
Socket spanner insert 13 mm 3/8" normal hex.	130213
Socket spanner insert 17 mm 3/8" normal hex.	130217
Socket spanner insert 19 mm 3/8" normal hex.	130219
Allen Key Socket 5.0 x 85 mm 3/8" for hex. socket	140305
Allen Key Socket 6.0 x 85 mm 3/8" for hex. socket	140306
Allen Key Socket 8.0 x 85 mm 3/8" for hex. socket	140308
Allen Key Socket 10.0 x 85 mm 3/8" for hex. socket	140310
Allen Key Socket 5.0 x 125 mm 3/8" for hex. socket	140105
Angel screwdriver 5 mm , insulated	116305
Angel screwdriver 6 mm , insulated	116306
Screwdriver 0.6 x 2.8 x 75 mm	111528
Wedge plastic 20 x 170 mm, red	652003
Cable knife with replaceable blade	281500

## Tool Set Cable Jointers

### Standard Equipment:

- Case with compartments for the following tools:
- Sliding caliper 1/20 150mm
- Flexible rule 3m
- Steel brush
- Rasp without handle
- Halfround file with handle
- Screwdriver:
  - 0.5 x 3 x 100mm
  - 0.8 x 4 x 100mm
  - 1 x 5.5 x 125mm
- Ball ended Screwdriver 6mm
- Hammer 300g and light hammer Ø 35mm
- Wedge
- Electrician's scissors
- Cable knife with replacement blade
- Replacement blade for cable knife
- Universal knife with replacement blade
- 3 replacement blades for universal knife
- Illuminated magnifier
- Engineers pliers 190mm
- Cable Cutter 160mm
- Tube Silicone
- Allen wrench 2,5mm  
(for blade replacement)

Picture includes  
special equipment  
ratchet cutter



Description	Order ref.	INT Id.	Length	Width	Height	⚖️
Tool Set Cable Jointers Set	729310	AG2020	450	380	190	each 6.3 kg
Tool Set Cable Jointers	729300	AG2000	450	380	165	each 3.7 kg

## Tool Set Cable Jointer



Description	Order ref.	⚖️
Tool Set Cable Jointer	7500262	

consisting of:

Description	Order ref.	Description	Order ref.
Plastic Case without foam padding	128900	Cable cutter, long version 240 mm, insulated	254326
Foam padding for 128900	128916	Angle screwdriver 5 mm, insulated	116305
Light Hammer Size 1/25 non rebound, insulated	410322	Angle screwdriver 6 mm, insulated	116306
Ratchet lever 3/8" insulated	131338	Allen key 5.0 x 85 mm 3/8" for hex. sockethead screw	140305
Alignment tool 95-150 mm <sup>2</sup> 3/8" insulated	132095	Allen key 6.0 x 85 mm 3/8" for hex. sockethead screw	140306
Wedge plastic, red 170 mm	652003	Allen key 8.0 x 85 mm 3/8" for hex. sockethead screw	140308
Cable knife with replaceable blade	281500	T-handle screwdriver 5 mm, 115 x 95 mm	117305
Replacement blade for 281500	281501	T-handle screwdriver 6 mm, 115 x 95 mm	117306
Insulation removal knife, insulated	244300		



## Safety Tool Set Training in tool case

- Detailed technical description of the tool case can be found on Page 145



Description (without tools)	Order ref.	Length	Width	Height	⚖️
Tool case, black, (without tools)	734002	440	175	350	4 kg
Tool case, red, (without tools)	734004	440	175	350	4 kg

Description (Set)	Order-ref.	⚖️
Safety tool set Training	734010	7.1 kg

consisting of:


Description	Order ref.	Description	Order ref.
Tool case, red	734004	Nut spinner 8.0 mm	136508
Side cutter 160 mm	236316	Nut spinner 9.0 mm	136509
Engineers pliers 180 mm	216318	Nut spinner 10.0 mm	136510
Telephone pliers 160 mm	225316	Nut spinner 13.0 mm	136513
Long round nosed pliers 160mm	218816	Screwdriver 0.6 x 2.8 x 75 mm	111528
Round cable cutter VDE Cu/Al 35mm <sup>2</sup> max.	254316	Screwdriver 0.6 x 3.0 x 150 mm	111530
Cable knife with replaceable blade	281500	Screwdriver 0.6 x 3.5 x 100 mm	111535
Open end spanner 7 mm insulated VDE	151307	Screwdriver 0.8 x 4.0 x 100 mm	111540
Open end spanner 8 mm insulated VDE	151308	Screwdriver 1.0 x 5.5 x 125 mm	111555
Open end spanner 10 mm insulated VDE	151310	Screwdriver 1.2 x 6.5 x 150 mm	111565
Open end spanner 13 mm insulated VDE	151313	Screwdriver 1.2 x 8.0 x 175 mm	111580
Open end spanner 16 mm insulated VDE	151316	Cross Head Screwdriver Size 1	113501
Open end spanner 17 mm insulated VDE	151317	Cross Head Screwdriver Size 2	113502
Open end spanner 18 mm insulated VDE	151318	Screwdriver 0.25 x 1.5 x 40mm ELECTRONIC	110715
Open end spanner 19 mm insulated VDE	151319	Cross Head Screwdriver Size 00 ELECTRONIC	113700
Nut spinner 5.5 mm	136555	Voltage and Polttester Type analogue	012010
Nut spinner 6.0 mm	136506	Case for voltage and Polttester	012050
Nut spinner 7.0 mm	136507	Continuity tester CONTROL - VDE	012025

## Safety Tool Set Meter I in Shoulder and carrying bag

- Detailed technical description of the tool case can be found on Page 144



Description (without tools)	Order ref.	Length	Width	Height	
Shoulder and carrying bag , red,	735222	270	170	320	3.6 kg

Description (Set)	Order ref.	
Safety Tool Set Meter I	735225	5.6 kg

consisting of:

Description	Order ref.
Shoulder and carrying bag , red	735222
Side cutter 160 mm	236316
Round cabel cutter 160 mm	218316
Telephone pliers 200 mm	225320
Nut spinner 8,0 mm insulated	136508
Screwdriver 0.4 x 2.5 x 80 mm power form grip	111125
Screwdriver 0.6 x 3.5 x 100 mm power form grip	111135
Screwdriver 0.8 x 4.0 x 100 mm power form grip	111140
Screwdriver 1.0 x 5.5 x 125 mm power form grip	111155
Screwdriver 1.2 x 6.5 x 150 mm power form grip	111165
Cable knife with replaceable blade	281500
Plastic box for push on cover - 6.5 x 16 cm (2 pieces)	000902
Screw starter Ø 5 mm x 240 mm, insulated	111696

## Safety Tool Set Meter II in tool case

► Detailed technical description of the tool case can be found on Page 149



Description (without tools)	Order ref.	Length	Width	Height	⚖️
Tool case, red	737111	440	195	360	4 kg

Description (Set)	Order ref.	⚖️
Safety Tool Set Meter II	737125	7 kg


consisting of:


Description	Order-ref.	Description	Order-ref.
Tool case- System, rot	737111	Cross head screwdriver Size 2	113502
Side cutter 160 mm	236316	Screw retaining screwdr. „0 x 125 mm Square grip	111641
Engineers pliers 180 mm	216318	Screw retaining screwdr. 5.0 x 150 mm Square grip	111651
Flat nosed pliers 160 mm	217316	Nut spinner 8.0 mm insulated	136508
Telephone pliers 200 mm, gerade	225320	Nut spinner 9.0 mm insulated	136509
Cable knife with replaceable blade	281500	Nut spinner 10.0 mm insulated	136510
Screwdriver 0.4 x 2.5 x 75 mm	111525	Nut spinner for wing nuts Lg. 200 mm	136202
Screwdriver 0.6 x 3.0 x 150 mm	111530	Safety goggles	666000
Screwdriver 0.6 x 3.5 x 100 mm	111535	Rubber cover material 600 x 600 x 1.0 mm	641204
Screwdriver 0.8 x 4.0 x 100 mm	111540	Safety clamp „LEMP“ short (4 pieces)	651409
Screwdriver 1.0 x 5.5 x 125 mm	111555	Push on cover 10 x 50 mm conical (10 pieces)	645006
Screwdriver 1.2 x 6.5 x 150 mm	111565	Push on cover 10 x 40 mm with boot (10 pieces)	646004
Cross head screwdriver Size 0	113500	Plastic box for push on covers-6.5 x 16 cm (2 pieces)	000902
Cross head screwdriver Size 1	113501	Brush 1 1/2", angled, insulated	552402

## Safety Tool Set Meter III in tool case

- Detailed technical description of the tool case can be found on Page 147



Description (without tools)	Order ref.	Length	Width	Height	
Tool case, black	737102	425	215	355	5 kg
Tool case, red	737112	425	215	355	5 kg

Description (Set)	Order ref.	
Safety Tool Set Meter III	737101	11 kg

consisting of:

Description	Order ref.	Description	Order-ref.
Tool case black	737102	Nut spinner 8.0 mm	136508
Side cutter 180 mm	236318	Nut spinner 9.0 mm	136509
Engineers pliers 200 mm	216320	Nut spinner 10.0 mm	136510
Round pliers 160 mm	218316	Electrical gloves class 0 size 10	631520
Flat noised pliers 180 mm	217918	Underglove ,cotton	631000
Insulation stripper 165 mm	271316	Safety fuse withdrawal gloove / leather	659001
Cable knife with safety cap	281300	Safety goggles (Nylon)	666000
Screwdriver 0.6 x 4.5 x 175 mm Square	111599	Insulation tape black (2 pieces)	643300
Screwdriver 1.0 x 4.5 x 175 mm Square	111598	Rubber cover material 1000 x 1000 x 2,5 mm	641306
Screwdriver 0.6 x 2.8 x 75 mm Square	111528	Push on cover 10 x 100 mm, conical (15 pieces)	645000
Screwdriver 0.6 x 3.5 x 100 mm Square	111535	Push on cover 10 x 100 mm with boot (15 pieces)	646010
Screwdriver 1.2 x 6.5 x 150 mm Square	111565	Voltage tester measuring range 150-250V	010300
Nut spinner 7.0 mm	136507	Voltage tester 100-500 V	01330001

## Safety Tool Kit Distribution in tool case

- Detailed technical description of the tool case can be found on Page 149



Description (without tools)	Order ref.	Length	Width	Height	⚖️
Tool case, red	737111	440	195	360	4 kg

Description (Set)	Order ref.	⚖️
Safety Tool Set Distribution	737115	9.8 kg

consisting of:


Description	Order ref.	Description	Order ref.
Tool case- System, red	737111	Screwdriver 1.2 x 6.5 x 150 mm power grip	111165
Side cutter 160 mm	236316	Screwdriver 1.2 x 8.0 x 175 mm power grip	111180
Engineers pliers 190 mm	216319	Screw retaining screwdr. 4.0 x 125 mm square grip	111641
Flat nosed pliers 160 mm	217316	Screw retaining screwdr. 5.0 x 150 mm square grip	111651
Flat nosed pliers 180 mm, long jaws	217918	Magnetic bit holding screwdriver complete, 6 Bit	119300
Wire positioning pliers 180 mm	223318	Nut spinner 8.0 mm insulated	136508
Insulation stripper insulated	271316	Nut spinner 9.0 mm insulated	136509
Cable knife with replaceable blade	281500	Nut spinner for wingnut 200 mm	136202
Screwdriver 0.4 x 2.5 x 80 mm power grip	111125	Push on cover 40 x 6 mm, transp. conical (20 pieces)	645004
Screwdriver 0.8 x 4.0 x 100 mm power grip	111140	Plastic box for push on cover - 6.5 x 16 cm (2 pieces)	000902
Screwdriver 1.0 x 5.5 x 125 mm power grip	111155		

## Safety Tool Set Universal in tool case

- Detailed technical description of the tool case can be found on Page 146



Description (without tools)	Order-ref.	Length	Width	Height	
Tool case, red	735002	500	160	330	3650

Description (Set)	Order-ref.	
Safety Tool Set Universal	735001	8900

consisting of:

Description	Order-ref.	Description	Order-ref.
Tool case, red	735002	Open end spanner 10 mm	151310
Side cutter 160 mm	236316	Open end spanner 11 mm	151311
Engineers pliers 180 mm	216318	Open end spanner 12 mm	151312
Telephone pliers 200 mm	225320	Open end spanner 13 mm	151313
Insulation stripper	271316	Open end spanner 14 mm	151314
Cable knife	281300	Open end spanner 17 mm	151317
Insulation removal knife	244300	Open end spanner 19 mm	151319
T-Shaped lever 3/8"	125402	Screwdriver 0.6 x 2.8 x 75 mm square grip	111528
Socket Spanner Insert 10 mm 3/8" normal hex.	130210	Screwdriver 0.8 x 4.0 x 100 mm square grip	111540
Socket Spanner Insert 11 mm 3/8" normal hex.	130211	Screwdriver 1.0 x 5.5 x 125 mm square grip	111555
Socket Spanner Insert 12 mm 3/8" normal hex.	130212	Elektrical safety gloves size 10, class 0	631520
Socket Spanner Insert 13 mm 3/8" normal hex.	130213	Rubber cover material 1000 x 1000 x 1,6 mm	641305
Socket Spanner Insert 14 mm 3/8" normal hex.	130214	Rubber cover material 250 x 350 x 1,6 mm	641303
Socket Spanner Insert 17 mm 3/8" normal hex.	130217	Safety clamp with hook „LEMP“ (6 pieces)	651402
Socket Spanner Insert 19 mm 3/8" normal hex.	130219	Push on cover 30 x 130 mm mit boot (4 pieces)	646030
Nut spinner 8.0 mm insulated	136508	Voltage and pole tester type analogue	012010
Nut spinner 9.0 mm insulated	136509		

## Safety Tool Set Industry I in tool case

► Detailed technical description of the tool case can be found on Page 145



Description (without tools)	Order ref.	Length	Width	Height	⚖️
Tool case, black	734002	440	175	350	4 kg
Tool case, red	734004	440	175	350	4 kg

Description (Set)	Order ref.	⚖️
Safety Tool Set Industry I	734001	9260

consisting of:

Description	Order ref.	Description	Order ref.
Tool case, black	734002	Open end spanner 12 mm VDE	151312
Side cutter 160 mm	236316	Open end spanner 13 mm VDE	151313
Engineers pliers 200 mm	216320	Open end spanner 14 mm VDE	151314
Telephone pliers 200 mm	225320	Open end spanner 17 mm VDE	151317
Telephone pliers 200 mm angled	225321	Open end spanner 19 mm VDE	151319
Insulation stripper 165 mm	271316	Screwdriver 0.6 x 2.8x 75 mm	111528
Cable knife with safety cap	281300	Screwdriver 0.8 x 4.0 x 100 mm	111540
Insulation removal knife with safety cap	244300	Screwdriver 1.0 x 5.5 x 125 mm	111555
T-Shaped lever 3/8" square end	125402	Nut spinner 7.0 mm	136507
Ratchet lever 3/8" VDE	131338	Nut spinner 8.0 mm	136508
Socket spanner insert 10 mm 3/8" normal hex.	130210	Nut spinner 9.0 mm	136509
Socket spanner insert 12 mm 3/8" normal hex.	130212	Nut spinner 10.0 mm	136510
Socket spanner insert 13 mm 3/8" normal hex.	130213	Nut spinner 11.0 mm	136511
Socket spanner insert 14 mm 3/8" normal hex.	130214	Nut spinner 12.0 mm	136512
Socket spanner insert 17 mm 3/8" normal hex.	130217	Nut spinner 13.0 mm	136513
Socket spanner insert 19 mm 3/8" normal hex.	130219	Nut spinner 17.0 mm	136517
Socket spanner insert 22 mm 3/8" normal hex.	130222	Electrical gloves class 0 size 10	631520
Socket spanner insert 24 mm 3/8" normal hex.	130224	Voltage tester 100-500 Volt	01330001
Open end spanner 10 mm VDE	151310	Case for voltage tester	013800

## Safety Tool Set Industry II in Tool case

► Detailed technical description of the tool case can be found on Page 151



Description (without tools)	Order ref.	Length	Width	Height	⚖️
Tool case- System, red	737312	440	245	360	4 kg

Description (Set)	Order ref.	⚖️
Safety Tool Set Industry II	737325	9.8 kg

consisting of:

Description	Order-ref.	Description	Order-ref.
Tool case, red	737312	Screwdriver 0.4 x 2.5 x 80 mm power grip	111125
Round cable cutter VDE Cu/Al 35 mm <sup>2</sup> max.	254316	Screwdriver 0.6 x 3.5 x 100 mm power grip	111135
Side cutter 160 mm	236316	Screwdriver 0.8 x 4.0 x 100 mm power grip	111140
Engineers pliers 190 mm	216319	Screwdriver 1.0 x 5.5 x 125 mm power grip	111155
Round nosed pliers 160 mm	218316	Screwdriver 1.2 x 6.5 x 150 mm power grip	111165
Flat nosed pliers 160 mm	217316	Screwdriver 1.2 x 8.0 x 175 mm power grip	111180
Telephone pliers 200 mm, gerade	225320	Screw retaining Screwdriver 3.0 x 100 mm Square	111631
Plane grip pliers 180 mm	223318	Screw retaining Screwdriver 4.0 x 125 mm Square	111641
Tweezers 200 mm, angeled 4 mm,tip insulated	111800	Magnetic bit holding screwdriver complete, 6 Bit	119300
Insulation stripper 165 mm	271316	Phönix-Screwdriver 0.9 x 6.5 x 150 mm	111750
Cable knife with replaceable blade	281500	Phönix-Screwdriver 0.6 x 3.5 x 100 mm	111751
Open end spanner 6 mm insulated VDE	151306	Chubby Screwdriver 1.2 x 6.5 x 25 mm	111721
Open end spanner 7 mm insulated VDE	151307	Screw holder Ø 4 mm x 240 mm,insulated	111692
Open end spanner 8 mm insulated VDE	151308	Screw holder Ø 5 mm x 240 mm,insulated	111696
Open end spanner 9 mm insulated VDE	151309	Nut spinner 6.0 mm insulated	136506
Open end spanner 10 mm insulated VDE	151310	Nut spinner 7.0 mm insulated	136507
Open end spanner 11 mm insulated VDE	151311	Nut spinner 8.0 mm insulated	136508
Open end spanner 12 mm insulated VDE	151312	Nut spinner 9.0 mm insulated	136509
Open end spanner 13 mm insulated VDE	151313	Nut spinner 10.0 mm insulated	136510
Open end spanner 14 mm insulated VDE	151314	Electrical gloves class 0 size 10	631520
Open end spanner 17 mm insulated VDE	151317	Voltage tester 100-500 Volt	01330001
Open end spanner 19 mm insulated VDE	151319	Plastic box for push on cover - 6.5 x 16 cm (2 pieces)	000902
Brush 1 1/2", angled, insulated	552402		

## Safety Tool Set - Industry III in Tool Case

► Detailed technical description of the tool case can be found on Page 148



Description (without tools)	Order ref.	Length	Width	Height	⚖️
Tool Case, red	737005	440	245	360	4 kg

Description (Set)	Order ref.	⚖️
Safety tool set Industry III	737010	14,5 kg

consisting of:

Description	Order ref.
Tool case, red	737005
Engineers pliers 200 mm	216320
Telephone pliers 200 mm	225320
Round nosed pliers 160 mm	218316
Flat nosed pliers 160 mm	217316
Insulation stripper insulated	271316
Side cutter 180 mm	236318
Cable knife mit gerader Klinge	281300
Screwdriver 0.4 x 2.5 x 75 mm	111525
Screwdriver 0.6 x 3.0 x 100 mm	111531
Screwdriver 0.6 x 3.5 x 100 mm	111535
Screwdriver 0.8 x 4.0 x 125 mm	111541
Screwdriver 1.0 x 5.5 x 150 mm	111554
Screwdriver 1.2 x 8.0 x 175 mm	111580
Screwdriver 1.6 x 10.0 x 200 mm	111510
Cross head screwdriver size 0	113500
Cross head screwdriver size 1	113501
Cross head screwdriver size 2	113502
Cross head screwdriver size 3	113503
Angle screwdriver 5mm	116305
Angle screwdriver 6mm	116306
Screw retaining screwdriver 3.0 x 100 mm power grip	111630
Screw retaining screwdriver 4.0 x 125 mm power grip	111640
Screw retaining screwdriver 5.0 x 150 mm power grip	111650
Nut spinner 7.0 mm insulated	136507
Nut spinner 8.0 mm insulated	136508
Nut spinner 10.0 mm insulated	136510
Open end spanner 6 mm insulated VDE	151306
Open end spanner 7 mm insulated VDE	151307
Open end spanner 8 mm insulated VDE	151308
Open end spanner 9 mm insulated VDE	151309
Open end spanner 10 mm insulated VDE	151310
Open end spanner 11 mm insulated VDE	151311
Open end spanner 12 mm insulated VDE	151312
Open end spanner 13 mm insulated VDE	151313
Open end spanner 14 mm insulated VDE	151314
Open end spanner 17 mm insulated VDE	151317

Description	Order ref.
Open end spanner 19 mm insulated VDE	151319
Open end spanner 22 mm insulated VDE	151322
Open end spanner 24 mm insulated VDE	151324
Single end ring spanner 6 mm insulated VDE	161306
Single end ring spanner 7 mm insulated VDE	161307
Single end ring spanner 8 mm insulated VDE	161308
Single end ring spanner 9 mm insulated VDE	161309
Single end ring spanner 10 mm insulated VDE	161310
Single end ring spanner 11 mm insulated VDE	161311
Single end ring spanner 12 mm insulated VDE	161312
Single end ring spanner 13 mm insulated VDE	161313
Single end ring spanner 14 mm insulated VDE	161314
Single end ring spanner 17 mm insulated VDE	161317
Single end ring spanner 19mm insulated VDE	161319
Single end ring spanner 22 mm insulated VDE	161322
Single end ring spanner 24 mm insulated VDE	161324
Angled mirror insulated	111799

Ratchet Spanner Set 1/2" in case

Description	Order ref.
Plastic case red without foam padding	128900
Foam padding for 1/2" ratchet lever set	128901
Ratchet lever 1/2"	131312
Extension piece 1/2" auto locking system 125 mm	133412
Extension piece 1/2" auto locking system 250 mm	133425
T-Shaped lever 1/2" UNIVERSAL	125702
Nut spinner Allen key 10 mm 1/2" normal hex.	130410
Nut spinner Allen key 11 mm 1/2" normal hex.	130411
Nut spinner Allen key 12 mm 1/2" normal hex.	130412
Nut spinner Allen key 13 mm 1/2" normal hex.	130413
Nut spinner Allen key 14 mm 1/2" normal hex.	130414
Nut spinner Allen key 17 mm 1/2" normal hex.	130417
Nut spinner Allen key 19 mm 1/2" normal hex.	130419
Nut spinner Allen key 22 mm 1/2" normal hex.	130422
Nut spinner Allen key 24 mm 1/2" normal hex.	130424
Nut spinner Allen key 32 mm 1/2" normal hex.	130432

**Safety Tool Set AuS Electro Installation**  
in tool case



<b>Description (without tools)</b>	<b>Order-ref.</b>	⚖️
Tool case with plastic edges, 440 x 255 x 370 mm	9737312	
<b>Description (Set)</b>	<b>Order-ref.</b>	⚖️
Safety tool set AuS electro installation	737323	

consisting of:

Description	Order ref.	Description	Order-ref.
Tool case with plastic edges, 440x255x370 mm	9737312	Open end spanner 11 mm insulated	151311
Screwdriver 1.6 x10.0 x 200 mm square grip	111510	Open end spanner 12 mm insulated	151312
Screwdriver 0.6 x 3.5 x 100 mm square grip	111535	Open end spanner 13 mm insulated	151313
Screwdriver 0.8 x 4.0 x 100 mm square grip	111540	Open end spanner 14 mm insulated	151314
Screwdriver 1.0 x 5.5 x 125 mm square grip	111555	Open end spanner 16 mm insulated	151316
Screwdriver 1.2 x 6.5 x 150 mm square grip	111565	Open end spanner 17 mm insulated	151317
Screwdriver 1.0 x 4.5 x 175 mm square grip	111598	Open end spanner 18 mm insulated	151318
Screwdriver PH 1 x 80 mm square grip	113501	Open end spanner 19 mm insulated	151319
Screwdriver PH 2 x 100 mm square grip	113502	Open end spanner 24 mm insulated	151324
T-handle screwdriver 8 mm, 160 x 95 mm	117508	Single end ring spanner 13 mm insulated	161313
Four arm nut wrench 10 x 11 x 13 x 17 mm insulated	121409	Single end ring spanner 16 mm insulated	161316
Nut Spinner Allen key 10mm 1/2" normal hex.	130410	Single end ring spanner 17 mm insulated	161317
Nut Spinner Allen key 11mm 1/2" normal hex.	130411	Single end ring spanner 18 mm insulated	161318
Nut Spinner Allen key 12mm 1/2" normal hex.	130412	Single end ring spanner 19 mm insulated	161319
Nut Spinner Allen key 13mm 1/2" normal hex.	130413	Engineers pliers 200 mm, insulated	216320
Nut Spinner Allen key 14mm 1/2" normal hex.	130414	Side cutter 180 mm, insulated	236318
Nut Spinner Allen key 17mm 1/2" normal hex.	130417	Round cable cutter - Lemp 170 mm VDE/GS	254316
Nut Spinner Allen key 19mm 1/2" normal hex.	130419	Cable knife , insulated	281300
Nut Spinner Allen key 24mm 1/2" normal hex.	130424	Brush 1 1/2", angled insulated	552402
Ratchet lever 1/2" insulated	131312	Brush head 1 1/2", angled	552412
Extension piece 1/2" auto locking system 125mm	133412	Adhesive tape 8000 x 50 mm, black	643300
Nut spinner 8 mm square grip	136508	Push on cover 10 x 100mm conical	645000
Nut spinner 9 mm square grip	136509	Push on cover 10 x 50mm conical	645006
Nut spinner 10 mm square grip	136510	Push on cover 20 x 110mm	646020
Nut spinner 12 mm square grip	136512	Push on cover 10 x 30mm conical	647030
Open end spanner 10 mm insulated	151310	Safety clamp	651402



## Safety Tool Set Power Supply in tool case

► Detailed technical description of the tool case can be found on Page 151



Description	Order ref.	Length	Width	Height	
Tool case, red	737312	440	245	360	4 kg
Description	Order ref.				
Safety tool set power supply	737326				25 kg

consisting of:

Description	Order ref.	Description	Order ref.
Tool case , red	737312	Rubber cover material 1 m x 1 m x 1.0 mm (2 pieces)	641205
Cable and wire cutter 600 mm	253360	Storage case for safety rubber matting	732310
Bag for cable and wire cutter 600 mm	737021	Push on cover 10 x 100 mm with boot (8 pieces)	646010
Side cutter 160 mm	236316	Push on cover 20 x 110 mm with boot (8 pieces)	646020
Power side cutter 250 mm	237325	Push on cover 30 x 130 mm with boot (8 pieces)	646030
Engineers pliers 200 mm	216320	Push on cover 40 x 150 mm with boot (8 pieces)	646040
Round nosed pliers 160 mm	218316	Push on cover 50 x 185 mm with boot (8 pieces)	646050
Flat nosed pliers 160 mm	217316	Push on cover 10 x 100 mm, conical (8 pieces)	645000
Cable jointers knife with safety cap, insulated	281300	Wedge without groove, red (2 pieces)	652002
Special cable knife, insulated	288700	Wedge wood with groove	653000
Cable knife with replaceable blade	281500	Bordering chisel for NKBA-cable 150 x 25 mm	654000
Open end spanner 10 mm insulated VDE	151310	Brush 1 1/2", angled, insulated	552402
Open end spanner 11 mm insulated VDE	151311	Safety clamp (10 pieces)	651402
Open end spanner 12 mm insulated VDE	151312		
Open end spanner 13 mm insulated VDE	151313		
Open end spanner 14 mm insulated VDE	151314		
Open end spanner 15 mm insulated VDE	151315		
Open end spanner 16 mm insulated VDE	151316		
Open end spanner 17 mm insulated VDE	151317		
Open end spanner 18 mm insulated VDE	151318		
Open end spanner 19 mm insulated VDE	151319		
Open end spanner 22 mm insulated VDE	151322		
Screwdriver 0.4 x 2.5 x 75 mm	111525		
Screwdriver 0.6 x 3.5 x 100 mm	111535		
Screwdriver 0.8 x 4.0 x 100 mm	111540		
Screwdriver 1.0 x 5.5 x 125 mm	111555		
Screwdriver 1.2 x 6.5 x 150 mm	111565		
Screwdriver 1.6 x 10.0 x 200 mm	111510		
Cross head screwdriver Size 1	113501		
Cross head screwdriver Size 2	113502		
Screw retaining screwdriver 4.0 x 125 mm	111641		
Screw retaining screwdriver 6.0 x 175 mm	111661		
Nut spinner 8.0 mm insulated	136508		
Nut spinner 9.0 mm insulated	136509		
Nut spinner 10.0 mm insulated	136510		
T-handle screwdriver SW 5, heavy design	117505		
T-handle screwdriver SW 6, heavy design	117506		
T-handle screwdriver SW 8, heavy design	117508		
Four arm nut wrench 10 x 13 x 14 x 17 mm insulated	121404		
Rubber insulating matting 1 m x 1 m x 3 mm	642600		
		<i>Ratchet spanner set 1/2" in case</i>	
		<b>Description</b>	<b>Order-ref.</b>
		Plastic case red without foam padding	128900
		Foam padding for 1/2" ratchet spanner set	128901
		Adjustable torque ratchet 1/2" VDE 8-56 Nm	131912
		T-Shaped lever 1/2" UNIVERSAL	125702
		Ratchet lever 1/2"	131312
		Extension piece 1/2" auto. locking system 125 mm	133412
		Extension piece 1/2" auto. locking system 250 mm	133425
		Nut spinner Allen key 10 mm 1/2" normal hex.	130410
		Nut spinner Allen key 11 mm 1/2" normal hex.	130411
		Nut spinner Allen key 12 mm 1/2" normal hex.	130412
		Nut spinner Allen key 13 mm 1/2" normal hex.	130413
		Nut spinner Allen key 14 mm 1/2" normal hex.	130414
		Nut spinner Allen key 15 mm 1/2" normal hex.	130415
		Nut spinner Allen key 16 mm 1/2" normal hex.	130416
		Nut spinner Allen key 17 mm 1/2" normal hex.	130417
		Nut spinner Allen key 18 mm 1/2" normal hex.	130418
		Nut spinner Allen key 19 mm 1/2" normal hex.	130419
		Socket spanner insert 22 mm 1/2" normal 6 kt	130422
		Socket spanner insert 19 x 125 mm 1/2" 12 kt	135619
		Socket spanner insert 22 x 125 mm 1/2" 12 kt	135622
		Allen key socket 5.0 x 85 mm 1/2"	140505
		Allen key socket 6.0 x 85 mm 1/2"	140506
		Allen key socket 8.0 x 85 mm 1/2"	140508

## Safety Tool Set Cable Assembly in tool case

► Detailed technical description of the tool case  
can be found on Page 146



Description (without tools)	Order ref.	Length	Width	Height	⚖️
Tool case, black	730002	690	200	340	3.4 kg

Description (Set)	Order ref.	⚖️
Safety Tool Set Cable Assembly	730001	10.9 kg

consisting of:


Description	Order-ref.	Description	Order-ref.
Tool case, black	730002	Nut spinner 8.0 mm	136508
Folding back for Set Nr. 7700, made of canvas	730003	Nut spinner 9.0 mm	136509
Side cutter 180 mm	236318	Nut spinner 10.0 mm	136510
Engineers pliers 200 mm	216320	Electrical gloves class 0 size 10	631520
Round nosed pliers 160 mm	218316	Bag for glooves	631001
Flat nosed pliers 180 mm	217918	Safety fuse withdrawal fuse	659001
Insulation stripper 165 mm	271316	Safety helmet white	662000
Cable knife with safety cap	281300	Face shield	664300
Screwdriver 0.6 x 4.5 x 175 mm Square	111599	Insulation tape black (2 pieces)	643300
Screwdriver 1.0 x 4.5 x 175 mm Square	111598	Rubber cover material 1000 x 1000 x 2.5 mm	641306
Screwdriver 0.6 x 2.8 x 75 mm Square	111528	Push on cover 10 x 100 mm, konisch (15 pieces)	645000
Screwdriver 0.6 x 3.5 x 100 mm Square	111535	Push on cover 10 x 100 mm with boot (15 pieces)	646010
Screwdriver 1.2 x 6.5 x 150 mm Square	111565	Voltage tester 100-500 Volt	01330001
Nut spinner 7.0 mm	136507		

## Set of Protective Items Cable Assembly in assortment case

- Detailed technical description of the tool case can be found on Page 147



Description (without tools)	Order ref.	Length	Width	Height	
Assortment case, red	736002	425	195	240	3 kg

Description (Set)	Order ref.	
Set of Protective Items Cable Assembly	736001	3.8 kg

consisting of:

Description	Order-ref.
Assortment case, red	736002
Rubber cover material 120 x 120 x 1.6 mm (4 pieces)	641301
Rubber cover material 130 x 230 x 1.6 mm (4 pieces)	641302
Rubber cover material 250 x 350 x 1.6 mm (2 pieces)	641303
Safety clamp „LEMP“ (12 pieces)	651402
Push on cover 30 x 130 mm with boot (8 pieces)	646030
Cover for NH-Fuse Lower part 260 x 140 mm (3 pieces)	647326
Wedge wood with groove	653000



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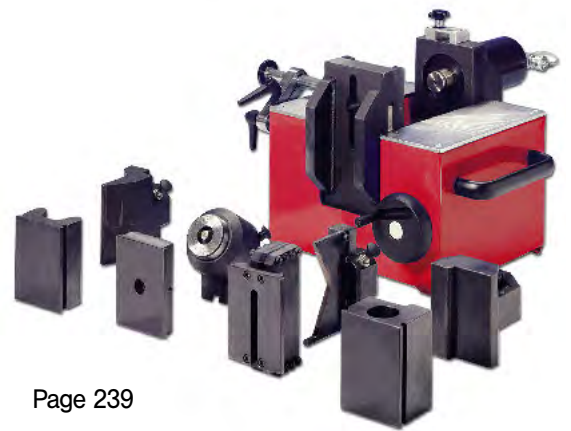
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## Hydraulic Compression and Cutting Tools

- Hydraulic Compression Tool
- Electric Hydraulic Compression Tool
- Hydraulic Compression Head for Drive Mechanics
- Foot Operated Hydraulic Pump, Hydraulic Drive Mechanics
- Safety Cutting Unit
- Hydraulic Cutting Tools
- Electric Hydraulic Cutting Tools
- Hydraulic Cutting Tools for Drive Mechanics
- Electric Bus Bar Processing Units

## PS25 – Hydraulic Cutting Head up to 25mm

Designed to cut aluminum, copper and steel cables up to a diameter of 25 mm. To operate it must be combined with a hydraulic pump (page 244 - 245).

### Technical Characteristics:

- Light and compact structure
- Blades made of high strength treated steel
- Head can be opened for easy cable insertion
- Quick male connection with automatic lock system and non detachable dust cap
- Interchangeable cutting edges (*on request*)
- Cutting diameter: 25mm
- Cutting force generated: 60kN
- Operating pressure: 700bar (70MPa)

### Set Equipment:

- Hydraulic Cutting Head
- Case for cutting head



PS25



Description	Order ref.	INT Id.	Dimensions	⚖
Cutting Head hydraulic 25mm with case	25842501	PS25	140x230x60mm	approx. 2 kg
Fixed cutting blade for cutting head	25842591	GMPS25	80x65x9mm	approx. 200
Moveable cutting blade for cutting head	25842592	SMPS25	50x31x6mm	approx. 40

Sector of use:		Tensile-strength N/mm	Ø 9 mm	Ø 11 mm	Ø 13 mm	Ø 15 mm	Ø 17 mm	Ø 19 mm	Ø 21 mm	Ø 23 mm	Ø 25 mm	Ø 27 mm
Copper	Rope and cable	< 410										
	Bar	< 300										
	Bar	< 250										
Aluminium	Bar	< 340										
	Rope and cable	< 200										
	Bar	< 160										
Aldrey	Cable	< 340										
Alu/Steel	Rope	< 1800										
Steel	Rope	< 2200										
	Bar	< 600										
	Bar	< 420										
	Rope (> 200 spins)	< 180										

## HS25 - Manual Hydraulic Cutting Tool up to 25mm

Designed to cut aluminum, copper and steel cables up to a diameter of 25 mm.

### Technical Characteristics:

- Light and compact structure
- Cutting head with snap closure and blade guide, rotates 270°
- Quick feed with double hydraulic cylinder
- Pressure limiter
- Manual return in any position
- Cutting diameter: 25mm
- Cutting force generated: 60kN
- Operating pressure: 700bar (70MPa)

### Set Equipment:

- Manual hydraulic cutting tool
- Plastic Case for the Cutting Tool



HS25



Description	Order ref.	INT Id.	Dimensions	⚖️
Manual Hydraulic Cutting Tool 25mm Set	25832501	HS25	450x190x70mm	approx 4 kg
Manual Hydraulic Cutting Tool 25mm	25832511	HS25-lose	403x145x55mm	approx 3 kg
Plastic Case for manual hydraulic cutting tool	25832580	KKHS25	450x195x70mm	approx 1 kg
Fixed cutting blade for cutting head	25842591	GMPS25	80x65x9mm	approx 200 g
Movable cutting blade for cutting head	25842592	SMPS25	50x31x6mm	approx 40 g

Sector of use:		Tensile strength N/mm	Ø 9 mm	Ø 11 mm	Ø 13 mm	Ø 15 mm	Ø 17 mm	Ø 19 mm	Ø 21 mm	Ø 23 mm	Ø 25 mm	Ø 27 mm
Copper	Rope and cable	< 410										
	Bar	< 300										
	Bar	< 250										
Aluminium	Bar	< 340										
	Rope and cable	< 200										
	Bar	< 160										
Aldrey	Cable	< 340										
Alu/Steel	Rope	< 1800										
Steel	Rope	< 2200										
	Bar	< 600										
	Bar	< 420										
	Rope (> 200 spins)	< 180										

## ASI25 – Battery Operated Hydraulic Cutting Tool up to 25mm

Designed to cut aluminum, copper and steel cables up to a diameter of 25mm.

### Technical Characteristics:

- Light and compact structure
- Cutting head with snap closure; rotates 270°
- High speed feed with double hydraulic cylinder
- Pressure release button with single handed operation (on both sides, for left and right handed operators)
- Rotating plastic grip between the device body and head, for easy and safe handling in any working position
- Fastening ring for shoulder strap
- Ergonomic grip for weight balance and easy and safe operation
- Plastic housing, grip and pressure release button, insulating and shock resistant
- Intelligent electronic tool for the following functions and messages:
  - Continuous battery state control with 10 LEDs (7 green + 2 orange + 1 red)
  - multi function LED (with three colours) for:
    - control of operation and status messages: (green = ok; orange = maintenance/service; red = fault)
    - control and visualisation of the next maintenance interval
    - fault messages (for overload, over-current, high temperature, etc)
- Cutting force: 60kN



ASI25

### SET Equipment:

- Battery-operated hydraulic cutting tool
- 14.4V/2,6Ah Ni-MH - battery - RA6
- Battery charger - LG4
- Handy grip for safe transport
- Rigid case
- Shoulder strap

### Optional Accessories (see page 44):

- 14.4V/3,0Ah Ni-MH - battery - RA7
- 14.4V/3,6Ah Ni-MH - battery - RA8
- Adapter for supply voltages 230V AC / 115V AC
- Quick battery charger with optical signal - LG5
- Cigar-lighter battery charger - LGZ

Equipment see Page 194

Description	Order ref.	INT Id.	Dimensions	⚖
Battery-operated hydr. cutting tool 25mm Set	25841001	ASI25	440x400x100mm	approx 6.5 kg
Fixed cutting blade for cutting head	25842591	GMPS25	80x65x9mm	approx 200 g
Moveable cutting blade for cutting head	25842592	SMPS25	50x31x6mm	approx 40 g

Sector of use:		Tensile-strength N/mm	Ø 9 mm	Ø 11 mm	Ø 13 mm	Ø 15 mm	Ø 17 mm	Ø 19 mm	Ø 21 mm	Ø 23 mm	Ø 25 mm	Ø 27 mm
Copper	Rope and cable	< 410										
	Bar	< 300										
	Bar	< 250										
Aluminium	Bar	< 340										
	Rope and cable	< 200										
	Bar	< 160										
Aldrey	Cable	< 340										
Alu/Steel	Rope	< 1800										
Steel	Rope	< 2200										
	Bar	< 600										
	Bar	< 420										
	Rope (> 200 spins)	< 180										

## PS45 – Hydraulic Cutting Head up to 45mm

Designed to cut aluminum, copper and steel cables up to a diameter of 45 mm. To operate it must be combined with a hydraulic pump (page 244 - 245).

### Technical Characteristics:

- Light and compact structure
- Blades made of high strength treated steel
- Head can be opened for easy cable insertion
- Quick male connection with automatic lock system and non detachable dust cap
- Interchangeable cutting edges (*on request*)
- Cutting diameter: 45mm
- Cutting force generated: 60kN
- Operating pressure: 700bar (70MPa)


### Set Equipment:

- Hydraulic Cutting Head
- Case for cutting head



PS45



Description	Order ref.	INT Id.	Dimensions	
Cutting Head hydraulic 45mm with case	25842001	PS45	380x145x70mm	approx 2.5 kg
Fixed cutting blade for cutting head	25842091	GMPS45	44x55x10mm	approx 100 g
Moveable cutting blade for cutting head	25842092	SMPS45	45x52x7mm	approx 100 g

Sector of use:		Tensile strength N/mm	Ø 9 mm	Ø 11 mm	Ø 13 mm	Ø 15 mm	Ø 17 mm	Ø 19 mm	Ø 21 mm	Ø 23 mm	Ø 25 mm	Ø 27 mm	Ø 29 mm	Ø 31 mm	Ø 33 mm	Ø 35 mm	Ø 37 mm	Ø 39 mm	Ø 41 mm	Ø 43 mm	Ø 45 mm	Ø 47 mm	
Copper	Rope and cable	< 410																					
	Bar	< 300																					
	Bar	< 250																					
Aluminium	Bar	< 340																					
	Rope and cable	< 200																					
	Bar	< 160																					
Aldrey	Cable	< 340																					
Alu/Steel	Rope	< 1800																					
Steel	Rope	< 2200																					
	Bar	< 600																					
	Bar	< 420																					
	Rope (> 200 spins)	< 180																					

## HSI45 - Manual Hydraulic Cutting Tool up to 45mm

Designed to cut aluminum, copper and steel cables up to a diameter of 45 mm.

### Technical Characteristics:

- Light and compact structure
- Cutting head with snap closure and blade guide, rotates 270°
- Quick feed with double hydraulic cylinder
- Single hand use by innerside handle
- Pressure limiter
- Manual return in any position
- Cutting diameter: 25mm
- Cutting force generated: 60kN
- Operating pressure: 700bar (70MPa)

### Set Equipment:

- Manual Hydraulic Cutting Tool
- Plastic Case for manual hydraulic cutting tool



HSI45

Description	Order ref.	INT Id.	Dimensions	⚖️
Manual Hydraulic Cutting Tool 45mm Set	25834501	HSI45	710x270x100mm	approx 7.7 kg
Manual Hydraulic Cutting Tool 45mm	25834511	HSI45-lose	600x175x70mm	approx 6 kg
Plastic Case for manual hydraulic cutting tool	25834580	KKHS45	710x270x100mm	approx 1.7 kg
Fixed cutting blade for cutting head	25842091	GMPS45	44x55x10mm	approx 100 g
Movable cutting blade for cutting head	25842092	SMPS45	45x52x7mm	approx 100 g

Sector of use:		Tensile strength N/mm	Ø 9 mm	Ø 11 mm	Ø 13 mm	Ø 15 mm	Ø 17 mm	Ø 19 mm	Ø 21 mm	Ø 23 mm	Ø 25 mm	Ø 27 mm	Ø 29 mm	Ø 31 mm	Ø 33 mm	Ø 35 mm	Ø 37 mm	Ø 39 mm	Ø 41 mm	Ø 43 mm	Ø 45 mm	Ø 47 mm	
Copper	Rope and cable	< 410																					
	Bar	< 300																					
	Bar	< 250																					
Aluminium	Bar	< 340																					
	Rope and cable	< 200																					
	Bar	< 160																					
Aldrey	Cable	< 340																					
Alu/Steel	Rope	< 1800																					
Steel	Rope	< 2200																					
	Bar	< 600																					
	Bar	< 420																					
	Rope (> 200 spins)	< 180																					

## ASI45 – Battery Operated Hydraulic Cutting Tool up to 45mm

Designed to cut aluminum, copper and steel cables up to 45mm in diameter.



### Technical Characteristics:

- Light and compact structure
- Cutting head with snap closure; rotates 270°
- High speed feed with double hydraulic cylinder
- Pressure release button with single-handed operation (on both sides, for left- and right-handed operators)
- Rotating plastic grip between the device body and head, for easy and safe handling in any working position
- Fastening ring for shoulder strap
- Ergonomic grip for weight balance and easy and safe operation
- Plastic housing, grip and pressure release button, insulating and shock resistant
- Intelligent electronic tool for the following functions and messages:
  - Continuous battery state control with 10 LEDs (7 green + 2 orange + 1 red)
  - multifunction LED (with three colours) for:
    - control of operation and status messages: (green = ok; orange = maintenance/service; red = fault)
    - control and visualisation of the next maintenance interval
    - fault messages (for overload, over-current, high temperature, etc)
- Cutting force: 60kN



### SET Equipment:

- Battery-operated hydraulic cutting tool
- 14.4V/2.6Ah Ni-MH - battery - RA6
- Battery charger - LG6
- Handy grip for safe transport
- Rigid case
- Shoulder strap

### Optional Accessories (see page 44):

- 14.4V/3.0Ah Ni-MH - battery - RA7
- 14.4V/3.6Ah Ni-MH - battery - RA8
- Adapter for supply voltages 230V AC / 115V AC
- Quick battery charger with optical signal - LG5
- Cigar-lighter battery charger - LGZ

Equipment see Page 194

ASI45

Description	Order-ref.	INT-Id.	Dimensions	
Battery-operated hydraulic cutting tool 45mm Set	25851001	ASI45	600x380x140mm	approx 8 kg
Fixed cutting blade for cutting head	25842091	GMPS45	44x55x10mm	approx 100 g
Moveable cutting blade for cutting head	25842092	SMPS45	45x52x7mm	approx 100 g

Sector of use:		Tensile strength N/mm	Ø 9 mm	Ø 11 mm	Ø 13 mm	Ø 15 mm	Ø 17 mm	Ø 19 mm	Ø 21 mm	Ø 23 mm	Ø 25 mm	Ø 27 mm	Ø 29 mm	Ø 31 mm	Ø 33 mm	Ø 35 mm	Ø 37 mm	Ø 39 mm	Ø 41 mm	Ø 43 mm	Ø 45 mm	Ø 47 mm	
Copper	Rope and cable	< 410																					
	Bar	< 300																					
	Bar	< 250																					
Aluminium	Bar	< 340																					
	Rope and cable	< 200																					
	Bar	< 160																					
Aldrey	Cable	< 340																					
Alu/Steel	Rope	< 1800																					
Steel	Rope	< 2200																					
	Bar	< 600																					
	Bar	< 420																					
	Rope (> 200 spins)	< 180																					

## PS50 – Hydraulic Cutting Head up to 50mm

Designed to cut aluminum, copper and steel cables up to a diameter of 50 mm. To operate it must be combined with a hydraulic pump (page 244 - 245).

### Technical Characteristics:

- Light and compact structure
- Blades made of high strength treated steel
- Head can be opened for easy cable insertion
- Quick male connection with automatic lock system and non detachable dust cap
- Interchangeable cutting edges (*on request*)
- Cutting diameter: 50mm
- Cutting force generated: 60kN
- Operating pressure: 700bar (70MPa)

### Set-Equipment:


- Hydraulic Cutting Head
- Case for cutting head



PS50



CE

Description	Order ref.	INT Id.	Dimensions	
Cutting Head hydraulic 45mm with case	25852001	PS50	380x140x70mm	approx 3 kg
Fixed cutting blade for cutting head	25852091	GMPS50	95x110x8mm	approx 300 g
Moveable cutting blade for cutting head	25852092	SMPS50	74x61x6mm	approx 100 g

Sector of use:		Tensile strength N/mm	Ø 20 mm	Ø 25 mm	Ø 30 mm	Ø 35 mm	Ø 40 mm	Ø 45 mm	Ø 50 mm	Ø 55 mm
			<	Ø	Ø	Ø	Ø	Ø	Ø	
Copper	Cable	< 410								
Aluminium	Cable	< 210								

## HSI50 - Manual Hydraulic Cutting Tool up to 50mm

Designed to cut aluminum, copper and steel cables up to a diameter of 50 mm.

### Technical Characteristics:

- Light and compact structure
- Cutting head with snap closure and blade guide, rotates 270°
- Quick feed with double hydraulic cylinder
- Single hand use by innerside handle
- Pressure limiter
- Manual return in any position
- Cutting diameter: 50mm
- Cutting force generated: 60kN
- Operating pressure: 700bar (70MPa)


### Set Equipment:

- Manual Hydraulic Cutting Tool
- Plastic Case for manual hydraulic cutting tool



HSI50



Description	Order ref.	INT Id.	Dimensions	
Manual Hydraulic Cutting Tool 50mm Set	25850001	HSI50	700x270x110mm	approx 6.7 kg
Manual Hydraulic Cutting Tool 50mm	25850011	HSI50-loose	620x170x60mm	approx 4.8 kg
Plastic Case for manual hydr. cutting tool	25850080	KKHS50	700x270x110mm	approx 2 kg
Fixed cutting blade for cutting head	25852091	GMPS50	95x110x8mm	approx 300 g
Movable cutting blade for cutting head	25852092	SMPS50	74x61x6mm	approx 100 g

Sector of use:		Tensile-strength N/mm	< Ø 20 mm	Ø 25 mm	Ø 30 mm	Ø 35 mm	Ø 40 mm	Ø 45 mm	Ø 50 mm	Ø 55 mm
Copper	Cable	< 410								
Aluminium	Cable	< 210								

## ASI50 – Battery Operated Hydraulic Cutting tool up to 50mm

Designed to cut aluminum, copper and steel cables up to 50mm in diameter.

### Technical Characteristics:

- Light and compact structure
- Cutting head with snap closure; rotates 270°
- High speed feed with double hydraulic cylinder
- Pressure release button with single-handed operation (on both sides, for left and right handed operators)
- Rotating plastic grip between the device body and head, for easy and safe handling in any working position
- Fastening ring for shoulder strap
- Ergonomic grip for weight balance and easy and safe operation
- Plastic housing, grip and pressure release button, insulating and shock resistant
- Intelligent electronic tool for the following functions and messages:
  - Continuous battery state control with 10 LEDs (7 green + 2 orange + 1 red)
  - Multi function LED (with three colours) for:
    - Control of operation and status messages: (green = ok; orange = maintenance/service; red = fault)
    - Control and visualisation of the next maintenance interval
    - Fault messages (for overload, over-current, high temperature, etc)
- Cutting force: 60kN



ASI50


### SET Equipment:

- Battery-operated hydraulic cutting tool
- 14.4V/2.6Ah Ni-MH - battery - RA6
- Battery charger - LG6
- Handy grip for safe transport
- Rigid case
- Shoulder strap

### Optional Accessories (see page 44):

- 14.4V/3.0Ah Ni-MH - battery - RA7
- 14.4V/3.6Ah Ni-MH - battery - RA8
- Adapter for supply voltages 230V AC / 115V AC
- Quick battery charger with optical signal - LG5
- Cigar-lighter battery charger - LGZ

Equipment see Page 194

Description	Order ref.	INT Id.	Dimensions	
Battery-operated hydr. cutting tool 50mm Set	25851101	ASI50	610x400x140mm	approx 7 kg
Fixed cutting blade for cutting head	25852091	GMPS50	95x110x8mm	approx 300 g
Moveable cutting blade for cutting head	25852092	SMPS50	74x61x6mm	approx 100 g

Sector of use:		Tensile strength N/mm	< Ø 20 mm	Ø 25 mm	Ø 30 mm	Ø 35 mm	Ø 40 mm	Ø 45 mm	Ø 50 mm	Ø 55 mm
Copper	Cable	< 410								
Aluminium	Cable	< 210								

## PS85 – Hydraulic Cutting Head up to 85mm

Designed to cut aluminum, copper and steel cables up to a diameter of 85 mm. To operate it must be combined with a hydraulic pump (page 244 - 245).

### Technical Characteristics:

- Light and compact structure
- Blades made of high strength treated steel
- Head can be opened for easy cable insertion
- Quick male connection with automatic lock system and non detachable dust cap
- Interchangeable cutting edges *(on request)*
- Cutting diameter: 85mm
- Cutting force generated: 70kN
- Operating pressure: 700bar (70MPa)

### Set Equipment:


- Hydraulic Cutting Head
- Case for cutting head



PS85



CE

Description	Order ref.	INT Id.	Dimensions	
Cutting Head hydraulic 45mm with case	25862001	PS85	465x370x110mm	approx 7 kg
Cutting Head hydraulic 45mm	25862011	PS85-lose	425x135x73mm	approx 5.7 kg
Case for cutting head	25860080	KKPS85	465x370x110mm	approx 1.3 kg
Fixed cutting blade for cutting head	25862091	GMPS85	130x135x11mm	approx 600 g
Moveable cutting blade for cutting head	25862092	SMPS85	110x94x8mm	approx 400 g

Sector of use:		Tensile strength N/mm	Ø 50 mm	Ø 55 mm	Ø 60 mm	Ø 65 mm	Ø 70 mm	Ø 75 mm	Ø 80 mm	Ø 85 mm	Ø 90 mm
			<	Ø	Ø	Ø	Ø	Ø	Ø	Ø	
Copper	Cable	< 410									
Aluminium	Cable	< 210									

## HSI85 – Manual Hydraulic Cutting Tool up to 85mm

Designed to cut aluminum, copper and steel cables up to a diameter of 85 mm.

### Technical Characteristics:

- Light and compact structure
- Cutting head with snap closure and blade guide, rotates 270°
- Quick feed with double hydraulic cylinder
- Single hand use by innerside handle
- Pressure limiter
- Manual return in any position
- Cutting diameter: 85mm
- Cutting force generated: 70kN
- Operating pressure: 700bar (70MPa)

### Set Equipment:

- Manual Hydraulic Cutting Tool
- Metallic Case for manual hydraulic cutting tool



HSI85

Description	Order ref.	INT Id.	Dimensions	⚖️
Manual Hydraulic Cutting Tool 85mm Set	25860002	HSI85	700x230x75mm	approx 12.8 kg
Manual Hydraulic Cutting Tool 85mm	25860011	HSI85-lose	690x150x70mm	approx 7.1 kg
Metalic Case for manual hydr. cutting tool	25860080	BKHS85	700x230x75mm	approx 5.7 kg
Fixed cutting blade for cutting head	25862091	GMPS85	130x135x11mm	approx 600 g
Moveable cutting blade for cutting head	25862092	SMPS85	110x94x8mm	approx 400 g

Sector of use:		Tensile strength N/mm	< Ø 50 mm	Ø 55 mm	Ø 60 mm	Ø 65 mm	Ø 70 mm	Ø 75 mm	Ø 80 mm	Ø 85 mm	Ø 90 mm
			Copper	Cable	< 410						
Aluminium	Cable	< 210									

## ASI85 – Battery Operated Hydraulic Cutting Tool up to 85mm

Designed to cut aluminum, copper and steel cables up to 50mm in diameter.

### Technical Characteristics:

- Light and compact structure
- Cutting head with snap closure; rotates 270°
- High speed feed with double hydraulic cylinder
- Pressure release button with single-handed operation (on both sides, for left and right handed operators)
- Rotating plastic grip between the device body and head, for easy and safe handling in any working position
- Fastening ring for shoulder strap
- Ergonomic grip for weight balance and easy and safe operation
- Plastic housing, grip and pressure release button, insulating and shock resistant
- Intelligent electronic tool for the following functions and messages:
  - Continuous battery state control with 10 LEDs (7 green + 2 orange + 1 red)
  - Multifunction LED (with three colours) for:
    - Control of operation and status messages: (green = ok; orange = maintenance/service; red = fault)
    - Control and visualisation of the next maintenance interval
    - Fault messages (for overload, over-current, high temperature, etc)
- Cutting force: 60kN



### SET Equipment:


- Battery-operated hydraulic cutting tool
- 14.4V/2.6Ah Ni-MH - battery - RA6
- Battery charger - LG6
- Handy grip for safe transport
- Rigid case
- Shoulder strap

### Optional Accessories (see page 44):

- 14.4V/3.0Ah Ni-MH - battery - RA7
- 14.4V/3.6Ah Ni-MH - battery - RA8
- Adapter for supply voltages 230V AC / 115V AC
- Quick battery charger with optical signal - LG5
- Cigar-lighter battery charger - LGZ

Equipment see Page 194

ASI85

Description	Order ref.	INT Id.	Dimensions	
Battery-operated hydr. cutting tool 85mm Set	25861001	ASI85	600x380x140mm	approx 9.5 kg
Fixed cutting blade for cutting head	25862091	GMPS85	130x135x11mm	approx 600 g
Moveable cutting blade for cutting head	25862092	SMPS85	110x94x8mm	approx 400 g

Sector of use:		Tensile strength N/mm	Ø 50 mm	Ø 55 mm	Ø 60 mm	Ø 65 mm	Ø 70 mm	Ø 75 mm	Ø 80 mm	Ø 85 mm	Ø 90 mm
			< 50 mm	Ø 55 mm	Ø 60 mm	Ø 65 mm	Ø 70 mm	Ø 75 mm	Ø 80 mm	Ø 85 mm	Ø 90 mm
Copper	Cable	< 410									
Aluminium	Cable	< 210									

## PS95 – Hydraulic Cutting Head up to 95mm

Designed to cut aluminum, copper and steel cables up to a diameter of 95 mm. To operate it must be combined with a hydraulic pump (page 244 - 245).

### Technical Characteristics:

- Light and compact structure
- Open cutting head with guide blade
- Easy handling by open cutting head
- Quick male connection with automatic lock system and non detachable dust cap
- Cutting diameter: 95mm
- Cutting force generated: 100kN
- Operating pressure: 700bar (70MPa)




### Set Equipment:

- Hydraulic Cutting Head
- Case for cutting head



PS95

Description	Order-ref.	INT-Id.	Dimensions	
Cutting Head hydraulic 120mm with case	25863001	PS95	450x300x150mm	approx 14.6 kg
Cutting Head hydraulic 120mm	25863011	PS95-lose	400x135x70mm	approx 8.3 kg
Case for cutting head	25863080	BKPS95	450x300x150mm	approx 6.3 kg
Moveable cutting blade for cutting head	25863091	SMPS95	168x116x12mm	approx 800 g
Knife backing plate for hydraulic cutting head	25863092	MFPS95	95x36x20mm	approx 200 g

Sector of use:		Tensile strength N/mm	< Ø 50 mm	Ø 55 mm	Ø 60 mm	Ø 65 mm	Ø 70 mm	Ø 75 mm	Ø 80 mm	Ø 85 mm	Ø 90 mm	Ø 95 mm	Ø 100 mm
Copper	Cable	< 410											
Aluminium	Cable	< 210											

## PS120 – Hydraulic Cutting Head up to 120mm

Designed to cut aluminium, copper and steel cables up to a diameter of 120 mm. To operate it must be combined with a hydraulic pump (page 244 - 245).

### Technical Characteristics:

- Light and compact structure
- Blades made of high strength treated steel
- Head can be opened for easy cable insertion
- Quick male connection with automatic lock system and non detachable dust cap
- Interchangeable cutting edges (*on request*)
- Cutting diameter: 120mm
- Cutting force generated: 100kN
- Operating pressure: 700bar (70MPa)


### Set Equipment:

- Hydraulic Cutting Head
- Case for cutting head



PS120



Description	Order ref.	INT Id.	Dimensions	
Cutting Head hydraulic 120mm with case	25861201	PS120	600x220x90mm	approx 14.9 kg
Cutting Head hydraulic 120mm	25861202	PS120-loose	550x175x75mm	approx 9.8 kg
Case for cutting head	25861280	BKPS120	600x220x90mm	approx 5.1 kg
Fixed cutting blade for cutting head	25861291	GMPS120	150x175x12mm	approx 1.3 kg
Moveable cutting blade for cutting head	25861292	SMPS120	142x130x11mm	approx 1 kg

Sector of use:		Tensile strength N/mm	Ø 95 mm	Ø 100 mm	Ø 105 mm	Ø 110 mm	Ø 115 mm	Ø 120 mm	Ø 125 mm
Copper	Cable	< 410							
Aluminium	Cable	< 210							
Steel-armiert	Cable	< 200							

## Optional Accessories:

### Storage Battery



RA4

RA5

Description	Order ref.	INT Id.
Storage Battery 12V / 2.6Ah Ni-MH	25800024	RA4
Storage Battery 12V / 3.0Ah Ni-MH	25800025	RA5
Storage Battery 14.4V / 2.6Ah Ni-MH	25800026	RA6
Storage Battery 14.4V / 3.0Ah Ni-MH	25800027	RA7



RA6

RA7

### Fast Battery Charger

Description	Order-ref.	INT-Id.
Battery Charger (max. charging time 50 min.)	25800104	LG4
Fast Battery Charger (with opt. charging light , max. charging time ca. 20 min.)	25800105	LG5
Battery Charger (charging time 30-75 min.)	25800104	LG6



LG6

### Battery Charger

Description	Order-ref.	INT-Id.
Battery Charger (12 V source)	25800110	LGZ



### Adapter

Description	Order-ref.	INT-Id.
Adapter for mains operation 230V AC/115V A	25800109	NG1



### Strap

Description	Order-ref.	INT-Id.
Strap (for hydraulic battery operated tools)	25800171	TG1
Strap (for hydraulic battery operated tools)	25800172	TG2



TG1

## Insulated Cable Shears

### Description of the insulated cable shears:

The insulated cable cutter is a device for safe cable cutting when the cable may be live and the absence of tension cannot be checked with complete safety. Such a check is particularly difficult in metallic screened cables. Therefore, before proceeding with any cutting operations, it is essential to take adequate measures to guarantee the operator's safety. One such measure is the use of an insulated cable cutter. This device – conforming to DIN EN 50340 (VDE 0682 part 661) – is made up essentially of a hydraulic pump and a cutting head to which a high pressure non-metallic hose of length 10.5 m is connected by a steady fitting.



 30.000V

### Field of application:

According to § 6.2 of the safety regulations "Electric Systems and Materials" (BGV A 2, ex VGB 4) and § 6.2 of EN 50 110 standard (VDE 0105 part 100), before carrying out any work on grounding systems for voltages up to 30kV the absence of tension must be guaranteed for the entire duration of the operations.

As it is not always possible to make sure there is no tension at the point where we must operate, especially for ground cables, it is essential to avoid the problem by cutting the cable with a special insulated cable cutter and at the same time carrying out a check at the point of interruption, e.g. by checking at the main switchboard.

### Equipotential connection – Grounding

For insulated cable cutters the DIN EN 50340 standard requires grounding the cutter head and establishing an equipotential connection between the pump and the ground. These regulations must however be implemented while respecting directives currently applicable in single countries. According to the "BGI 845-ZH1 / 437" directives, for instance, in Germany the cutting head cannot be individually grounded because the networks themselves are already grounded.

There must be however an equipotential connection between the pump and the ground.

### Maintenance:

To guarantee correct operation, constant availability and long life of the insulated cable cutters, Intercable suggests maintenance intervals of 2 years, and the work to be done only by authorised technicians. If a cut must be made under tension, it is however always necessary to carry out a check on the entire system.

In conformity with DIN VDE 0105 standard, part 100, par. 4.6 and with VGB 4 prescriptions, insulated cable cutters must be subjected to periodical checks by qualified technicians. According to GB regulations, the maintenance intervals must be defined and described by the manufacturer in the Instructions for Use.

### Photo:

The photographs below show the development of an electric arc during an experimental short circuit, and show clearly the danger that may threaten operators in the case of work done under tension. Personal injury can be avoided only by using insulated cable cutters.

### Electric arc in a test shortcircuit



Photo 1: 200ms



Photo 2: 800ms



Photo 3: 1.200ms



Photo 4: 1.600ms

## SSA – Insulated Cable Shears with Pedal Pump

Ideal for safe cutting of copper and aluminium cables up to the maximum allowable diameter for the head being used (see table below)

### Technical Characteristics:

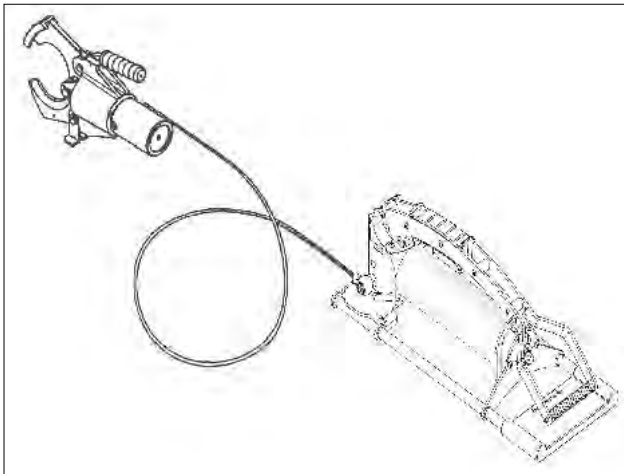
- Light and compact structure
- Reduced weight due to the use of light alloys and corrosion resistant materials
- Easy use and high stability due to the ergonomic pedal and the non-slip base
- Fast feeds by means of a double hydraulic cylinder
- Pressure control by pressure gauge
- Manual return in any position
- rotary quick coupling with dust cap
- Operating pressure: 625bar (62.5MPa)
- Low pressure-Pump capacity: 18.3cm<sup>3</sup> / Hub
- High pressure-Pump capacity: 2cm<sup>3</sup> / Hub
- Tank capacity: 1200ml
- Operating Temperature: -20°C bis +40°C



FP63-SSA

### Set Equipment SSA85, SSA95, SSA120:

- Pedal pump - FPI 63-SSA
- Hydraulic cutting head (85, 95 or 120mm) with flexible high pressure hose length 10,5m
- Plastic case with integral handle and wheels for easy transport of the entire equipment
- Steel insert for transporting the equipment without the case



Description	Order ref.	INT Id.	Dimensions	⚖️
Insulated cable shears with pedal pump 85mm EN50340	25834085	SSA85	680x520x360mm	approx 33 kg
Insulated cable shears with pedal pump 95mm EN50340	25834095	SSA95	680x520x360mm	approx 37 kg
Insulated cable shears with pedal pump 120mm EN50340	25834012	SSA120	680x520x360mm	approx 41 kg



Pedal Pump FPI 63-SSA + 10.5m high pressure hose	+ Cutting Head 85mm	+ Cutting Head 95mm		+ Cutting Head 120mm
	SSA85	SSA95	SSA120	
Description	85mm	95mm	120mm	
Cutting Diameter	85mm	95mm	120mm	
Operating Pressure	625bar (62.5MPa)	625bar (62.5MPa)	625bar (62.5MPa)	
Flexible High pressure hose	length 10,5m	length 10,5m	length 10,5m	
Drive Component	Pedal Pump FPI63	Pedal Pump FPI63	Pedal Pump FPI63	
Transport Case	Rigid Box	Rigid Box	Rigid Box	

## KV24 – Insulated Cable Shears with Battery Operated Pump

Suitable for safely cutting copper or aluminium wires of various diameters, depending on the cutting head used (see below).

### Technical Characteristics:

- Battery power supply
- Partial or total pressure release at any time using a remote control system (5 meter cable length)
- Automatic pressure release when maximum force is reached
- Possibility of coupling cable shearing heads together
- Built-in battery charger with display of the state of charge of the battery
- Degree of protection IP43
- Motor power: 370W
- Battery capacity: 14.4Ah
- Battery voltage: 24V
- Delivery rate: 0.5 l/min.
- Operating temperature: -20°C to +40°C
- Operating pressure: see below
- Cutting diameter: see below



30.000V

### Equipment

- Battery charger
- Remote control push-button with 5 meter connecting cable for electrical operation

Description	Order ref.	INT Id.	Dimensions	
Insulated cable shears ( without cuttinghead )	25000163	KV24	450x230x360mm	approx 28 kg



### Equipment

- Hydraulic cutting head (85, 95 or 120mm) with flexible high pressure hose length 10,5m
- Aluminium box for transporting both cutting head and hose

Description	Order ref.	INT Id.	Dimensions	
Safety Cutting Head 85mm	25839085	PS85-SSA	540x230x360mm	approx 33 kg
Safety Cutting Head 95mm	25839095	PS95-SSA	540x230x360mm	approx 37 kg
Safety Cutting Head 120mm	25839012	PS120-SSA	540x230x360mm	approx 41 kg



Battery-operated pump KV24	Cutting Head 85mm	Cutting Head 95mm		Cutting Head 120mm
Description	SSA85	SSA95	SSA120	
Cutting diameter	85mm	95mm	120mm	
Operating pressure	625bar (62.5MPa)	625bar (62.5MPa)	625bar (62.5MPa)	
Flexible high pressure hose	length 10.5m	length 10.5m	length 10.5m	
Drive component	battery-operated pump	battery-operated pump	battery-operated pump	
Transport case	Aluminium box	Aluminium box	Aluminium box	

## Crimping Pliers insulated EN60900

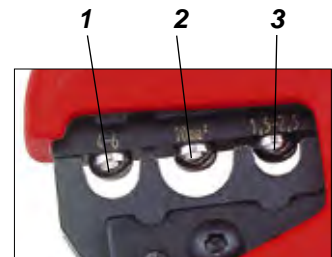
Designed to crimp insulated cable terminals and pre-insulated connectors. Can be used on live parts with voltage up to 1000V AC and 1500V DC.

### Technical Characteristics:

- Handles and head of the crimper are totally protected by insulated material.
- Minimum strength required to operate
- One-hand operation
- With incorporated (openable) automatic lock to guarantee completion of the compression operation.
- Automatic opening on completion of compression.
- Suitable for low temperature use: -40°C

### Model 2503 1010

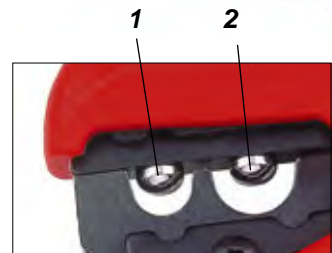
- Cross sections ranging: 1.5-2.5 / 4-6 / 10mm<sup>2</sup>
- Type of compression: spherical



Description	Order ref.	INT Id.	Insert cross section (mm <sup>2</sup> )			Type of compr.	Length	⚖
			1	2	3			
Insulated Crimper EN60900	25031010	2503 101	4-6	10	1.5 - 2.5	☑	280mm approx 680	
			AWG					
			12-10	8	16-14			

### Modell 2503 1020

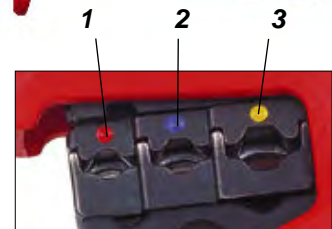
- Cross sections ranging: 10 / 16mm<sup>2</sup>
- Type of compression: spherical



Description	Order ref.	INT Id.	Insert cross section (mm <sup>2</sup> )			Type of compr.	Length	⚖
			1	2	-			
Insulated Crimper EN60900	25031020	2503 102	10	16	-	☑	280mm approx 680	
			AWG					
			8	5	-			

### Modell 2503 2010

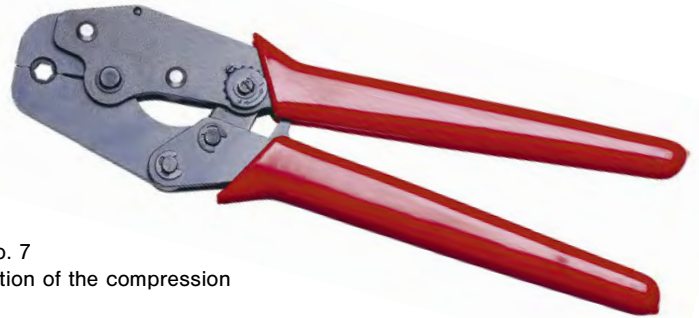
- Cross sections ranging: 0.5-1 / 1.5-2.5 / 4-6mm<sup>2</sup>
- Type of compression: oval form



Description	Order ref.	INT-Id.	Insert cross section (mm <sup>2</sup> )			Type of compr.	Length	⚖
			1	2	3			
Insulated Crimper EN60900	25032010	2503 201	0.5 - 1	1.5 - 2.5	4 - 6	☑	250mm approx 620	
			AWG					
			20 - 18	16 - 14	12 - 10			

## HZK7 – Mechanical Crimper for HRE-Connectors

Designed to crimp our HRE connectors for cross sections ranging from 6 to 16mm<sup>2</sup>. Used in the road lighting sector.



### Technical Characteristics:

- Single hand use
- Small force required ,compact dimensions
- Hexagonal compression components with DIN 48083 reference No. 7
- With incorporated (openable) automatic lock to guarantee completion of the compression
- Automatic opening on completion of compression

Description	Order ref.	INT Id.	Length	
Mechanical Crimper for HRE-Connectors	25041004	HZK7	255mm	approx 570

## HRE – Compression Connectors

HRE connectors are specifically designed to crimp single-solid wire conductors with cross sections ranging from 6 to 16mm<sup>2</sup>. HRE 16 connectors can be used both for multi-stranded 10mm<sup>2</sup> conductors and single-solid wire 16mm<sup>2</sup> conductors.

Order-ref.	INT-Id.	Section	Type of conductor	Material	Surface
PM6	25041006	6mm <sup>2</sup>	Round One wire (RE)	Copper	Tinned
PM10	25041010	10mm <sup>2</sup>	Round One wire (RE)	Copper	Raw
PM16	25041016	10 / 16mm <sup>2</sup>	Round Multi stranded (RM10) One wire (RE16)	Copper	Tinned



## Compression Tool with Automatic Adjustment to cable cross-section

### Technical Characteristics:

- Designed for square crimping of cable terminals with self adjustment for cross section.
- Full and precise crimping thanks to ratchet mechanism
- Integrated,safety lock to ensure the full crimping
- Mechanism opens automatically at end of crimping
- Ergonomic form and soft handle
- Minimum force requirement
- For cables between 0.08 - 10 mm<sup>2</sup>



Description	Order ref.	INT Id.	Length	
Adaptive Pliers till 10mm <sup>2</sup>	25041005	2504 1	240mm	approx 330

## Cable lug compression tool

- Self adjusting universal hand press tool for the application of insulated and non insulated cable lugs to DIN 46228
- Material: specially hardened burnished steel
- A clean four sided press pattern achieved by synchronous operation of the compression indents for cross sections 0.75 - 10 mm<sup>2</sup>
- A handy work tool with self adjustment to various cable lug sizes in just one profile.
- Compression stop point for maximum permissible compression.
- Adjustable compression values



## Range of compression tools(without picture)

- Powder lacquered complete with the following six different sizes of cable lugs  
100 pieces 1 mm<sup>2</sup>; 1.5 mm<sup>2</sup>; 2.5 mm<sup>2</sup>; 4 mm<sup>2</sup>; 6 mm<sup>2</sup>;  
50 pieces 10 mm<sup>2</sup>

Description	Order ref.	—mm—	Range of compression	
Cable lug compression tool	271600	180	automatic adjustment for cable 0.75 - 10 mm <sup>2</sup>	380
Selection of cable termination lugs (without cable lug compression tool)	710910	230 x 150		240

## MPSF6 – Mechanical compression tool to assemble and dismantle connectors with external cone in SF6-System

Designed for assembly and disassembly of the connector for external cone terminals of MV cables operating at voltages from 12 to 36 kV.

### Technical Characteristics:

- Mechanical tool with symmetrical operation
- Removable compression head
- Telescopic handles (350 - 560mm)
- Maximum stroke: 10mm
- Maximum threaded terminal travel: 30mm
- Compression force: 60kN
- Handgrip opening angle: 120°




MPSF6-lose



MPSF6-1

Range of application			
Head Size	Voltage Range	Amperage	Cross section
Terminal dies size 1	12kV,24kV,36kV	630A	25mm <sup>2</sup> -240mm <sup>2</sup>
Terminal dies size 1	12kV,24kV,36kV	800A	50mm <sup>2</sup> -300mm <sup>2</sup>
Terminal dies size 1	12kV,24kV,36kV,52kV	1250A	150mm <sup>2</sup> -630mm <sup>2</sup>

Description	Order ref.	INT Id.	Dimensions	
Mechanic comp. tool for SF6 System Gr. 1 Set	25041001	MPSF6-1	570x155x75mm	approx 6,6 kg
Mechanic comp. tool for SF6 System Gr. 2 Set	25041002	MPSF6-2	570x155x75mm	approx 6,2 kg
Mechanic comp. tool for SF6 System Gr. 3 Set	25041003	MPSF6-3	630x155x95mm	approx 8,7 kg
Mechanic tool for SF6 System without terminals	25040000	MPSF6-lose	515x155x73mm	approx 2,2 kg
Metallic case for mechanic compression tool	25040006	BKMPSF6	530x190x105mm	approx 2,5 kg




### Set Equipment:

- Mechanic compression tool
- Metallic case for manual hydraulic tool and the terminal dies



MKGR1

Description	Order ref.	INT Id.	Dimensions	
Terminal dies size 1 SF6 System	25040001	MKGR1	125x65x65mm	approx 1.9 kg
Terminal dies size 2 SF6 System	25040002	MKGR2	125x65x65mm	approx 1.7 kg
Terminal dies size 3 SF6 System	25040003	MKGR3	185x95x95mm	approx 4 kg

## HP45 – Manual Hydraulic Compression Tool 45kN (120mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 120 mm<sup>2</sup> cable cross section.

### Technical Characteristics:

- Light and compact structure.
- Pump body in light alloy.
- Click action compression head, rotates 180°
- Automatic pressure limiter.
- Manual return at any position by turning the main handle
- Maximum stroke: 16mm
- Compression force: 45kN
- Operating pressure: 470bar (47MPa)



Image with crimping dies

Sector of use	max.
● Hexagon crimping dies to DIN 48083 Cu	120mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	120mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St	95/15mm <sup>2</sup>
● Hexagon crimping dies for Cable shoe similar to DIN	120mm <sup>2</sup>
● Round die for Al- and Cu- sector-shaped conductor	150mm <sup>2</sup>


Crimping dies see Page 202



HP45

### Set-Equipment:

- Manual compression tool
- Plastic case for manual hydraulic tool and maximum 15 crimping dies

Description	Order ref.	INT Id.	Dimensions	
Manual hydraulic compression tool 45kN	25644501	HP45	460x240x90mm	approx 3.5 kg

## Crimping dies for HP45

Crimping dies according to DIN 48083  
for connectors according to DIN 46235, DIN 46287, Cu, Al and Al/St



Order ref.	INT Id.	Code No.	Compr. width	Cross section (mm <sup>2</sup> ) Copper		Cross section (mm <sup>2</sup> ) Aluminium		Cross section (mm <sup>2</sup> ) Aluminium Steel	
				tension free	full tension	tension free	full tension	Al-sleeve	St-sleeve
25694505	MK 5-45	5	5	6					
25694506	MK 6-45	6	5	10					16/2.5 25/4 35/6
25694507	U4-K7D	7	5						50/8
	MK 7-45								
25694508	MK 8-45	8	5	16	10-16				
25694509	U4-K9D	9	5						70/12 95/15
	MK 9-45								
25694510	U4-K10D	10	5	25	25				
	MK 10-45								
25694511	MK 10B-45	10	7			10	10		
25694512	U4-K12D	12	5	35	35				
	MK 12-45								
25694513	MK 12B-45	12	7			16-25	16-25	16/2.5 25/4	
25694514	U4-K14D	14	5	50	50				
	MK 14-45								
25694515	U4-K14	14	7			35	35	35/6	
	MK 14B-45								
25694516	U4-K16D	16	5	70	70				
	MK 16-45								
25694517	MK 16B-45	16	7			50	50	50/8	
25694518	U4-K18D	18	5	95					
	MK 18-45								
25694519	U4-K18	18	7			70	70	70/12	
	MK 18B-45								
25694520	MK 20-45	20	5	120	95				
25694522	MK 22B-45	22	7			95-120	95	95/15	

Hexagon crimping dies for  
cable lugs and connectors  
made of Copper similar to DIN



Round die to round off Copper and  
Aluminium sector shaped conductor



Order-ref.	INT-Id.	Compr. width	Cross section (mm <sup>2</sup> )
25690006	MH 6-45	5	6
25690010	MH 10-45	5	10
25690016	MH 16-45	5	16
25690025	MH 25-45	5	25
25690035	MH 35-45	5	35
25690050	MH 50-45	5	50
25690070	MH 70-45	5	70
25690095	MH 95-45	5	95
25690120	MH 120-45	5	120


Order-ref.	INT-ID.	Compr. width	Cross section (mm <sup>2</sup> )	
			SE	SM
25691010	UP 4.1-45	20		10
25691016	UP 5.1-45	20		16
25691025	UP 6.3-45	20	35	25
25691035	UP 7.5-45	20	50	35
25691050	UP 9.0-45	20	70	50
25691070	UP 10.5-45	20	95	70
25691095	UP 12.5-45	20	120	95
25691120	UP 14.0-45	20	150	120

### Special dies on request

## 7 Plastic case for crimping dies

for 19 crimping dies 45kN – 60kN



Description	Order ref.	INT Id.	Dimensions	
Plastic case for crimping dies	25600080	KKPE-45-50	250x170x50mm	approx 200

## HP50 – Manual Hydraulic Compression tool 50kN (185mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 185 mm<sup>2</sup> cable cross sections.

### Technical Characteristics:

- Light and compact structure.
- Pump body in light alloy.
- Click action compression head, rotates 180°
- Automatic pressure limiter.
- Manual return at any position by turning the main handle
- Maximum stroke: 16mm
- Compression force: 50kN
- Operating pressure: 520bar (52MPa)



Image with crimping dies

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	185mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	185mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St	150/25mm <sup>2</sup>
● Hexagon crimping dies for Cable shoe similar to DIN	185mm <sup>2</sup>
● Round die for Al- and Cu- sector-shaped conductor	240mm <sup>2</sup>


Crimping dies see Page 210



HP50

### Set-Equipment:

- Manual compression tool
- Plastic case for manual hydraulic tool and maximum 15 crimping dies

Description	Order ref.	INT Id.	Dimensions	
Manual hydraulic compression tool Set	25645001	HP50	460x240x90mm	approx 3.7 kg

## MP60-1 – Mechanical Compression Tool 60kN (185mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 185 mm<sup>2</sup> cable cross section.

### Technical Characteristics:

- Light and compact structure.
- Adjustable telescopic handles (Overall length 580-830mm)
- C-head that can rotate 360°
- Max. stroke: 20mm
- Compression force: 60kN

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	185mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	185mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	185mm <sup>2</sup>
● Round die for Al and Cu sector shaped conductor	185mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	95mm <sup>2</sup>
● Oval crimping dies for H branch terminals	35mm <sup>2</sup>
● Oval crimping dies for indent-connector DIN 48217 (Al/St rope)	120mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	95mm <sup>2</sup>
● Stripp off insert for Al/St Rope	120/20mm <sup>2</sup>
● Cutting Jaws for armored Al/Cu Cable	Ø 16mm

Crimping dies see Page 210



MP60-1

### Set Equipment:

- Mechanic compression tool
- Plastic case for manual hydraulic tool and crimping dies

Description	Order ref.	INT Id.	Dimensions	⚖
Compr. tool C-head 60kN Set	25646001	MP60-1	610x310x55mm	approx 4.6 kg
Compr. tool C-head 60kN without case	25646011	MP60-1-lose	560x160x50mm	approx 2.9 kg
Plastic case for MP 60	25646081	KKMP60-1	710x227x100mm	approx 1.7kg
Opening spring for crimping dies	25646098	OEF1	-	approx 40 g

## PP60-1 – Hydraulic Compression Head 60kN (240mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 240 mm<sup>2</sup> cable cross section.

The Compression Head must be combined with a hydraulic pump (Maximum pressure 700bar/70MPa). (see Page 244, Hydraulic pump)

### Technical Characteristics:

- Sturdy and compact structure
- Openable head to make it easy to position and insert the crimping dies
- Quick make snap lock connection and non detachable dust cap
- Compression force: 60kN
- Max. stroke: 17mm
- Operating pressure: 700bar (70MPa)



Picture with crimping dies

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	185mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	240mm <sup>2</sup>
● Round die for Al and Cu sector shaped conductor	300mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	95mm <sup>2</sup>
● Oval crimping dies for H branch terminals	35mm <sup>2</sup>
● Oval crimping dies for indent-connector DIN 48217 (Al/St rope)	120mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	95mm <sup>2</sup>
● Stripp off insert for Al/St Rope	120/20mm <sup>2</sup>
● Cutting Jaws for armored Al/Cu Cable	Ø 16mm


Crimping dies see Page 210



PP60-1

### Set Equipment:

- Hydraulic Compression Head
- Plastic case for Compression head and maximum 18 crimping dies

Description	Order ref.	INT Id.	Dimensions	
Hydraulic Compression Head Set 60kN	25646101	PP60-1	330x260x75mm	approx 2.3 kg
Hydraulic Compression Head 60kN without case	25646111	PP60-1-lose	200x80x50mm	approx 1.5 kg
Plastic case for compression head and crimping dies	25646180	KKPP60-1/2	330x260x75mm	approx 600 g

## HPI60-1 – Manual Hydraulic Compression Tool - 60kN (240mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 240 mm<sup>2</sup> cable cross section.

### Technical Characteristics:

- Robust and compact construction
- Tiltable compression head , rotates 270°
- Quick feed with double hydraulic cylinder
- Single hand use by innerside handle
- Pressure limiter
- Manual return in any position
- Max. stroke: 17mm
- Compression force: 60kN
- Operating pressure: 700bar (70MPa)

Die Sets Sector of use	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	185mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	240mm <sup>2</sup>
● Round die for Al- and Cu- sector-shaped conductor	300mm <sup>2</sup>
● Thorn-crimping dies for cable shoe to DIN 46234	95mm <sup>2</sup>
● Oval-crimping dies for H-branch terminals	35mm <sup>2</sup>
● Oval-crimping dies for indent-connector DIN 48217 (Al/St rope)	120mm <sup>2</sup>
● Trapezoid-crimping dies for wire end sleeve	95mm <sup>2</sup>
● Stripp off insert for Al/St rope	120/20mm <sup>2</sup>
● Cutting Jaws for armored Al/Cu cable	Ø 16mm

Crimping dies see Page 210



Picture with crimping dies




HPI60-1

### Set Equipment:

- Hydraulic compression tool
- Plastic case for Compression head and maximum 12 crimping dies

### INFO:

On request: Hydraulic tool API80-1 (Compression force 80kN).

Description	Order ref.	INT Id.	Dimensions	
Manual Hydraulic Compression Tool 60kN Set	25646201	HPI60-1	630x270x100mm	approx 5 kg
Manual Hydr. Compression Tool 60kN without case	25646211	HPI60-1-lose	475x165x60mm	approx 3.3 kg
Plastic Case for Hydraulic Compression Tool	25646280	KKHP60-1	630x270x100mm	approx 1.7 kg

## HPI60-1ISL – Manual Hydraulic Compression Tool – insulated 60kN (240mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 240 mm<sup>2</sup> cable cross sections.

### Technical Characteristics:

- Tool head and body completely covered with insulating material (with the exception of the compression area)
- Handle in insulating plastic shock proof material
- Robust and compact construction
- Tilttable compression head , rotates 270°
- Quick feed with double hydraulic cylinder
- Single hand use by innerside handle
- Pressure limiter
- Manual return in any position
- Max. stroke: 17mm
- Compression force: 60kN
- Operating pressure: 700bar (70MPa)



Picture with crimping dies

### Die Sets

	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	185mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	240mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	300mm <sup>2</sup>
● Thorn-crimping dies for cable shoe to DIN 46234	95mm <sup>2</sup>
● Oval-crimping dies for H branch terminals	35mm <sup>2</sup>
● Oval-crimping dies for indent-connector DIN 48217 (Al/St rope)	120mm <sup>2</sup>
● Trapezoid-crimping dies for wire end sleeve	95mm <sup>2</sup>
● Stripp off insert for Al/St rope	120/20mm <sup>2</sup>
● Cutting Jaws for armored Al/Cu cable	Ø 16mm


Crimping dies see Page 210



HPI60-1ISL

### Set Equipment:

- Hydraulic Compression Tool
- Plastic case for Compression tool and maximum 12 crimping dies

Description	Order ref.	INT Id.	Dimensions	
Manual Hydr. Compression Tool 60kN Set insulated	25646301	HPI60-1ISL	630x270x100mm	approx 5.4 kg
Manual Hydr. Compression Tool 60kN without case	25646311	HPI60-1ISL-loose	490x155x60mm	approx 3.7 kg
Plastic Case for Hydraulic Compression Tool	25646280	KKHP60-1	630x270x100mm	approx 1.7 kg

## API60-1 – Battery Operated Hydraulic Compression Tool 60kN (240mm<sup>2</sup>)

Designed to crimp terminals and connectors up to maximum 240mm<sup>2</sup>.

### Technical Characteristics:

- Light and compact structure
- Compression head with snap closure; rotates 270°
- High speed feed with double hydraulic cylinder
- Pressure release button with single handed operation (on both sides, for left- and right handed operators)
- Rotating plastic grip between the device body and head, for easy and safe handling in any working position
- Fastening ring for shoulder strap
- Ergonomic grip for weight balance and easy and safe operation
- Plastic housing, grip and pressure release button, insulating and shock resistant
- Intelligent electronic tool for the following functions and messages:
  - Continuous battery state control with 10 LEDs (7 green + 2 orange + 1 red)
  - Multifunction LED (with three colours) for:
    - Control of operation and status messages: (green = ok; orange = maintenance/service; red = fault)
    - Control and visualisation of the next maintenance interval
    - fFault messages (for overload, over current, high temperature, etc)
- Compression force: 60kN
- Max. Stroke: 17mm



Picture with crimping dies

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	240mm <sup>2</sup>
● Round die for Al and Cu sector shaped conductor	300mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	95mm <sup>2</sup>
● Oval crimping dies for H branch terminals	35mm <sup>2</sup>
● Oval crimping dies for indent connector DIN 48217 (Al/St rope)	120mm <sup>2</sup>
● Trapezoid-crimping dies for wire end sleeve	95mm <sup>2</sup>
● Stripp off insert for Al/St rope	120/20mm <sup>2</sup>
● Cutting Jaws for armored Al/Cu cable	Ø 16mm

Crimping dies see Page 210



API60-1

### SET Equipment:

- Battery-operated hydraulic compression tool
- 14.4V/2.6Ah Ni-MH - battery - RA6
- Battery charger - LG6
- Handy grip for safe transport
- Rigid case
- Shoulder strap

### Optional Accessories :

- 14.4V/3.0Ah Ni-MH - battery - RA7
- 14.4V/3.6Ah Ni-MH - battery - RA8
- Adapter for supply voltages 230V AC / 115V AC
- Quick battery charger with optical signal - LG5
- Cigar-lighter battery charger - LGZ

### INFO:

On request: Hydraulic tool API80-1 (Compression force 80kN).

Equipment see Page 238

Description	Order ref.	INT Id.	Dimensions	
Battery-operated hydr. compression tool 60kN Set	25646401	API60-1	610x400x140mm	approx 6 kg

## API60-1ISL – Battery Operated Hydraulic Compression Tool 60kN (240mm<sup>2</sup>)

Designed to crimp terminals and connectors up to maximum 240mm<sup>2</sup>.

### Technical Characteristics:

- Light and compact structure
- Compression head with snap closure; rotates 270°
- Tool head and body completely covered with insulating material (with the exception of the compression area)
- High speed feed with double hydraulic cylinder
- Pressure release button with single handed operation (on both sides, for left and right handed operators)
- Rotating plastic grip between the device body and head, for easy and safe handling in any working position
- Fastening ring for shoulder strap
- Ergonomic grip for weight balance and easy and safe operation
- Plastic housing, grip and pressure release button, insulating and shock resistant
- Intelligent electronic tool for the following functions and messages:
  - Continuous battery state control with 10 LEDs (7 green + 2 orange + 1 red)
  - Multifunction LED (with three colours) for:
    - Control of operation and status messages: (green = ok; orange = maintenance/service; red = fault)
    - Control and visualisation of the next maintenance interval
    - Fault messages (for overload, over-current, high temperature, etc)
- Compression force: 60kN
- Max. Stroke: 17mm



Picture with crimping dies

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	185mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	240mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	300mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	95mm <sup>2</sup>
● Oval crimping dies for H branch terminals	35mm <sup>2</sup>
● Oval crimping dies for indent connector DIN 48217 (Al/St rope)	120mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	95mm <sup>2</sup>
● Stripp off insert for Al/St rope	120/20mm <sup>2</sup>
● Cutting Jaws for armored Al/Cu cable	Ø 16mm

Crimping dies see Page 210



API60-1ISL

### SET Equipment:

- Battery-operated hydraulic cutting tool
- 14.4V/2.6Ah Ni-MH - battery - RA6
- Battery charger - LG6
- Handy grip for safe transport
- Rigid case
- Shoulder strap

### Optional Accessories :

- 14.4V/3.0Ah Ni-MH - battery - RA7
- 14.4V/3.6Ah Ni-MH - battery - RA8
- Adapter for supply voltages 230V AC / 115V AC
- Quick battery charger with optical signal - LG5
- Cigar-lighter battery charger - LGZ

Equipment see Page 238

Description	Order-ref.	INT-Id.	Dimensions	
Battery operated hydr. compr. tool 60kN Set insulated	25646501	API60-1ISL	610x400x140mm	approx 6.5 kg

## Crimping dies for HP50, \*MP60-1, PP60-1, HPI60-1, API60-1, API60-1ISL, HP80-1, AP80-1

Crimping dies according to DIN 48083 for connectors according to DIN 46235, DIN 46287, Cu, Al and Al/St



Order ref.	INT Id.	Code No	Compr. width	Cross section (mm <sup>2</sup> ) Copper		Cross section (mm <sup>2</sup> ) Aluminium		Cross section (mm <sup>2</sup> ) Aluminium-Steel	
				tension free	full tension	tension free	full tension	Al Sleeve	St Sleeve
25695505	MK 5-50	5	5	6					
25695506	MK 6-50	6	5	10					16/2.5 25/4 35/6
25695507	MK 7-50	7	5						50/8
25695508	MK 8-50	8	5	16	10-16				
25695509	MK 9-50	9	5						70/12 95/15
25695510	MK 10-50	10	5	25	25				
25695530	MK 10B-50	10	7			10			
25695511	MK 11-50	11	5						25
25695512	MK 12-50	12	5	35	35				
25695532	MK 12B-50	12	7			16-25	16-25	16/2.5 25/4	
25695513	U5-K13D MK 13-50	13	5						120/20 150/25
25695514	U5-K14D MK 14-50	14	5	50	50				
25695515	U5-K14 MK 14B-50	14	7			35	35	35/6	
25695516	MK 16-50	16	5	70	70				
25695517	MK 16B-50	16	7			50	50	50/8	
25695518	U5-K18D MK 18-50	18	5	95					
25695519	U5-K18 MK 18B-50	18	7			70	70	70/12	
25695520	U5-K20D MK 20-50	20	5	120	95				
25695521	MK 20B-50	20	7	120	95				
25695522	U5-K22D MK 22-50	22	5	150	120				
25695523	MK 22B-50	22	7			95-120	95	95/15	
25695525	MK 25-50	25	5	185	150				
25695526	MK 25B-50	25	7			150	120	44/32 50/30 120/20	
25695527	MK 27B-50	27	7						
25695528	MK 28-50 <sup>1)</sup>	28	5	240	185				
25695529	MK 28B-50	28	7			185	150-185	125/30 150/25	

Hexagon crimping dies for cable lugs and connectors made of copper similar to DIN



Round dies to round off copper and aluminium sector shaped conductor



Order ref.	INT Id.	Compr. width	Cross section (mm <sup>2</sup> )
25692006	MH 6-50	5	6
25692010	MH 10-50	5	10
25692016	MH 16-50	5	16
25692025	MH 25-50	5	25
25692035	MH 35-50	5	35
25692050	MH 50-50	5	50
25692070	MH 70-50	5	70
25692095	MH 95-50	5	95
25692120	MH 120-50	5	120
25692150	MH 150-50	5	150
25692185	MH 185-50	5	185
25692240	MH 240-50 <sup>1)</sup>	5	240

Order-ref.	INT-Id.	Compr. width	Cross section (mm <sup>2</sup> )	
			SE	SM
25693010	UP 4.1-50	20		10
25693016	UP 5.1-50	20		16
25693025	UP 6.3-50	20	35	25
25693035	UP 7.5-50	20	50	35
25693050	UP 9.0-50	20	70	50
25693070	UP 10.5-50	20	95	70
25693095	UP 12.5-50	20	120	95
25693120	UP 14.0-50	20	150	120
25693150	UP 15.7-50	20	185	150
25693185	UP 17.5-50	20	240	185
25693240	UP 20.2-50 <sup>1)</sup>	20	300	240

Strip off insert to strip off ASCR



Thorn-crimping dies for fine wire conductors



Cutting jaw for Al and Cu Cable

Order ref.	INT Id.	Cross section (mm <sup>2</sup> )
25694025	Al-St 25/4-50	25/4
25694035	Al-St 35/6-50	35/6
25694050	Al-St 50/8-50	50/8
25694070	Al-St 70/12-50	70/12
25694095	Al-St 95/15-50	95/15
25694120	Al-St 120/20-50	120/20

Order ref.	INT Id.	Cross section (mm <sup>2</sup> )
25695010	MDF 10-50	10
25695016	MDF 16-50	16
25695025	MDF 25-50	25
25695035	MDF 35-50	35
25695050	MDF 50-50	50

Order-ref.	INT-Id.	Application
25695017	MS16	Cutting insert to cut aluminium and copper (also armored) up to diameter of-16mm

<sup>1)</sup> not for HP50 und MP60-1

\* For the compression tool MP60-1 Opening spring (Order ref. OEF1) is also required.

## Crimping dies for HP50, \*MP60-1, PP60-1, HPI60-1, API60-1, API60-1ISL, HP80-1, AP80-1

Oval crimping dies for notch connector



Trapezoid crimping dies for wire end sleeve



Cu-Conductor		Al-Conductor		Al-Steel-rope		Cross section (mm <sup>2</sup> )	Order ref.	INT- d.	Compress width	Cross sect (mm <sup>2</sup> )
Order ref.	INT Id.	Order ref.	INT Id.	Order ref.	INT Id.					
25696010	MKO 10-50 Cu					10	25698010	MTT 10-50	20	10
25696016	MKO 16-50 Cu					16	25698016	MTT 16-50	20	16
25696025	MKO 25-50 Cu	25696026	MKO 25-50 Al			25	25698025	MTT 25-50	20	25
						35/6	25698035	MTT 35-50	20	35
25696036	MKO 35-50 Cu	25696037	MKO 35-50 Al			35	25698050	MTT 50-50	20	50
25696050	MKO 50-50 Cu	25696053	MKO 50-50 Al			50	25698070	MTT 70-50	20	70
				25696051	MKO 50/8-50	50/8	25698095	MTT 95-50	20	95
				25696052	MKO 50/30-50	50/30				
25696070	MKO 70-50 Cu	25696072	MKO 70-50 Al			70				
				25696071	MKO 70/12-50	70/12				
25696095	MKO 95-50Cu	25696096	MKO 95-50 Al			95				
25696120	MKO 120-50 Cu	25696121	MKO 120-50 Al			120				

Oval Crimping dies for the compression of compression dead-ends and oval connectors according to DIN 48217 and H branch terminals



Mandrel crimping dies for fork terminals according to DI N 46243



Order-ref.	INT-Id.	Compr. width	Cross Section (mm <sup>2</sup> )			H-Clamp Cu
			Dead end clamps and oval connectors			
			Cu	Al	St	
25697007	MO 7-50	5	6RE			
25697008	MO 8-50	5	10RE			
25697010	MO 10-50	5	10RM/16RE			6-10/6-10
25697012	MO 12-50	5	16	16		
25697016	MO 16-50	5	25	25		16/6-16
25697018	MO 18-50	5	35	35	35	25/6-25
25697020	MO 20-50	5	50	50	50	
25697021	MO 21-50	5				35/10-35
25697022	MO 22-50	5	70	70	70	
25697024	MO 24-50	5	95	95		
25697026	MO 26-50	5		120		

Order ref.	INT Id.	Cross sec (mm <sup>2</sup> )
25699010	MD 10-50	10
25699016	MD 16-50	16
25699025	MD 25-50	25
25699035	MD 35-50	35
25699050	MD 50-50	50
25699070	MD 70-50	70
25699095	MD 95-50	95

### Special dies on request

\*Opening spring (Order -ref. OEF1) must be ordered too if ordering dies for the MP60-1

### Adapter for Crimping Dies 45kN

this adapter allows use of all dies for the manual tool HP45 on models HP50, HP60 and MP60 .



Description	Order ref.	INT Id.	⚖
Adapter for Crimping dies 45kN	25695000	AD50-45	approx 50 g

### Plastic case for crimping dies

for hydraulic tools 45kN – 60kN



Description	Order ref.	INT Id.	Dimensions	⚖
Plastic case	25600080	KKPE-45-50	250x170x50mm	approx 200 g

## MP60-2 – Mechanical Compression Tool 60kN (300mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 300 mm<sup>2</sup> cable cross sections.

### Technical Characteristics:

- Light and robust structure
- Telescopic handles adjustable from 560 to 860 mm
- Tiltable compression head , rotates 360°
- Max. stroke: 19mm
- Compression force: 60kN

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	300mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	240mm <sup>2</sup>
● Oval crimping dies for C branch terminals	50mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	70mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	150mm <sup>2</sup>
● Oval crimping dies for indent connector to DIN 48217	120mm <sup>2</sup>

*Crimping dies see Page 216*



*Picture with crimping dies*



MP60-2

### Set Equipment:

- Mechanic Compression Tool
- Plastic case for compression tool and crimping dies

Description	Order ref.	INT Id.	Dimensions	⚖
Mechanic Compression Tool 60kN Set	25646601	MP60-2	610x310x55mm	approx 5.1 kg
Mechanic Compression Tool 60kN without case	25646611	MP60-2-loose	560x160x50mm	approx 3.4 kg
Plastic Case for MP60	25646080	KKMP60-2	610x310x55mm	approx 1.7 kg

## PP60-2 – Hydraulic Compression Head 60kN (300mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 300 mm<sup>2</sup> cable cross sections.

The Compression Head must be combined with a hydraulic pump (Maximum pressure 700bar/70MPa). (see Page 244, Hydraulic pump)

### Technical Characteristics:

- Sturdy and compact structure
- Openable head to make it easy to position and insert the crimping dies
- Quick make automatic lock connection and non detachable dust cap
- Max. Stroke: 17mm
- Compression Force: 60kN
- Operating pressure: 700bar (70 MPa)

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	300mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	240mm <sup>2</sup>
● Oval crimping dies for C branch terminals	50mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	70mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	150mm <sup>2</sup>
● Oval crimping dies for indent connector to DIN 48217	120mm <sup>2</sup>

Crimping dies see Page 217



CE


Picture with crimping dies



PP60-2

### Set-Equipment:

- Hydraulic Compression Head
- Plastic case for Compression head and maximum 18 crimping dies

Description	Order ref.	INT Id.	Dimensions	
Hydraulic Compression Head Set 60kN	25646701	PP60-2	330x260x75mm	approx 3.4 kg
Hydraulic Compression Head 60kN without case	25646711	PP60-2-lose	270x95x60mm	approx 2.8 kg
Plastic case for compression head and crimping dies	25646180	KKPP60-1/2	330x260x75mm	approx 600 g

## HPI60-2 – Manual Hydraulic Compression Tool 60kN (300mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 300 mm<sup>2</sup> cable cross sections.

### Technical Characteristics:

- Robust and compact construction
- Tiltable compression head , rotates 270°
- Quick feed with double hydraulic cylinder
- Easy to actuate pressure release device, activated at any position
- Max. stroke: 17mm
- Compression force: 60kN
- Operating pressure: 700bar (70MPa)

Sector of use	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	300mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	300mm <sup>2</sup>
● Oval crimping dies for C branch terminals	70mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	50mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	150mm <sup>2</sup>
● Oval crimping dies for indent-connector to DIN 48217	70mm <sup>2</sup>

*Crimping dies see Page 216*



*Picture with crimping dies*



HP60-2

### Set-Equipment:

- Hydraulic Compression Head
- Metal case for compression tool

Description	Order ref.	INT Id.	Dimensions	⚖
Manual Hydraulic Compression Tool 60kN Set	25646801	HPI60-2	700x260x105mm	approx 6 kg
Manual Hydr. Compression Tool 60kN without case	25646811	HPI60-2-lose	470x155x60mm	approx 3.3 kg
Metallic Case for HP60	25646880	BKHP60-2	700x260x105mm	approx 2.5 kg

## API60-2 – Battery Operated Hydraulic Compression Tool 60kN (300mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 300 mm<sup>2</sup> cable cross sections.

### Technical Characteristics:

- Light and compact structure
- Compression head with snap closure; rotates 270°
- High speed feed with double hydraulic cylinder
- Pressure release button with single-handed operation (on both sides, for left and right handed operators)
- Rotating plastic grip between the device body and head, for easy and safe handling in any working position
- Fastening ring for shoulder strap
- Ergonomic grip for weight balance and easy and safe operation
- Plastic housing, grip and pressure release button, insulating and shock resistant
- Intelligent electronic tool for the following functions and messages:
  - continuous battery state control with 10 LEDs (7 green + 2 orange + 1 red)
  - Multifunction LED (with three colours) for:
    - Control of operation and status messages: (green = ok; orange = maintenance/service; red = fault)
    - Control and visualisation of the next maintenance interval
    - Fault messages (for overload, over-current, high temperature, etc)
- Compression force: 60kN
- Max. Stroke: 20mm



Picture with crimping dies

### Die Sets

	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	300mm <sup>2</sup>
● Round die for Al- and Cu- sector-shaped conductor	300mm <sup>2</sup>
● Oval-crimping dies for C-branch terminals	50mm <sup>2</sup>
● Thorn-crimping dies for cable shoe to DIN 46234	70mm <sup>2</sup>
● Trapezoid-crimping dies for wire end sleeve	150mm <sup>2</sup>
● Oval-crimping dies for indent-connector to DIN 48217	70mm <sup>2</sup>

Crimping dies see Page 216



API60-2

### SET Equipment:

- Battery-operated hydraulic cutting tool
- 14.4V/2.6Ah Ni-MH - battery - RA6
- Battery charger - LG6
- Handy grip for safe transport
- Rigid case
- Shoulder strap

### Optional Accessories :

- 14.4V/3.0Ah Ni-MH - battery - RA7
- 14.4V/3.6Ah Ni-MH - battery - RA8
- Adapter for supply voltages 230V AC / 115V AC
- Quick battery charger with optical signal - LG5
- Cigar-lighter battery charger - LGZ

Equipment see Page 238

Description	Order ref.	INT Id.	Dimensions	
Battery operated hydr. compr. tool 60kN Set	25646901	API60-2	610x400x140mm	approx 6.5 kg

## Crimping dies for MP60-2, PP60-2, HP60-2, API60-2

Crimping dies according to DIN 48083 for connectors according to DIN 46235, DIN 46287, Cu, Al and Al/St



Order ref.	INT Id.	Code No.	Compr. width	Cross section (mm <sup>2</sup> ) Copper		Cross section (mm <sup>2</sup> ) Aluminium		Cross section (mm <sup>2</sup> ) Aluminium-Steel	
				tension free	full tension	tension free	full tension	Al-Hülse	St-Hülse
25686005	MK 5-CK	5	5	6					
25686006	MK 6-CK	6	5	10					16/2.5 25/4 35/6
25686007	MK 7-CK	7	5						50/8
25686008	MK 8-CK	8	5	16	10-16				
25686009	MK 9-CK	9	5						70/12 95/15
25686010	MK 10-CK	10	5	25	25				
25686011	MK 10B-CK	10	7			10	10		
25686012	MK 12-CK	12	5	35	35				
25686030	MK 12B-CK	12	7			16-25	16-25	16/2.5 25/4	
25686013	MK 13-CK	13	5						120/20 150/25
25686014	MK 14-CK	14	5	50	50				
25686015	MK 14B-CK	14	7			35	35	35/6	
25686016	MK 16-CK	16	5	70	70				
25686017	MK 16B-CK	16	7			50	50	50/8	
25686018	MK 18-CK	18	5	95					
25686019	MK 18B-CK	18	7			70	70	70/12	
25686020	MK 20-CK	20	5	120	95				
25686022	MK 22-CK	22	5	150	120				
25686023	MK 22B-CK	22	7			95-120	95	95/15	
25686025	MK 25-CK	25	5	185	150				
25686026	MK 25B-CK	25	7			150	120	44/32 50/30 120/20	
25686028	MK 28-CK	28	5	240	185				
25686029	MK 28B-CK	28	7			185	150-185	125/30 150/25	
25686032	MK 32-CK	32	5			240			
25686034	MK 34B-CK	34	5			300			

Hexagon crimping dies for cable shoes and connectors made of copper similar to DIN



Order ref.	INT Id.	Comp. width	Cross section (mm <sup>2</sup> )
25682006	MH 6-CK	5	6
25682010	MH 10-CK	5	10
25682016	MH 16-CK	5	16
25682025	MH 25-CK	5	25
25682035	MH 35-CK	5	35
25682050	MH 50-CK	5	50
25682070	MH 70-CK	5	70
25682095	MH 95-CK	5	95
25682120	MH 120-CK	5	120
25682150	MH 150-CK	5	150
25682185	MH 185-CK	5	185
25682240	MH 240-CK	5	240
25682300	MH 300-CK	5	300

Round dies to round off copper and aluminium sector-shaped conductor



Order ref.	INT Id.	Comp. width	Cross section (mm <sup>2</sup> )	
			SE	SM
25683010	UP 4.1-CK	19,5		10
25683016	UP 5.1-CK	19,5		16
25683025	UP 6.3-CK	19,5	35	25
25683035	UP 7.5-CK	19,5	50	35
25683050	UP 9.0-CK	19,5	70	50
25683070	UP 10.5-CK	19,5	95	70
25683095	UP 12.5-CK	19,5	120	95
25683120	UP 14.0-CK	19,5	150	120
25683150	UP 15.7-CK	19,5	185	150
25683185	UP 17.5-CK	19,5	240	185
25683240	UP 20.2-CK	19,5	300	240

## Crimping dies for MP60-2, PP60-2, HP60-2, API60-2

Oval crimping dies for the compression of compression dead ends and oval connectors according to DIN 48217 and H branch terminals



Order ref.	INT Id.	Comp. width	Cross Section (mm <sup>2</sup> ) Crimpends and oval crimp terminators	
			Cu	Al
25686110	MO 10-CK	5	10	10
25686116	MO 16-CK	5	16	16
25686125	MO 25-CK	5	25	25
25686135	MO 35-CK	5	35	35
25686150	MO 50-CK	5	50	50
25686170	MO 70-CK	5	70	70

Mandrel crimping dies for fine wire conductors



Order ref.	INT- d.	Cross Section (mm <sup>2</sup> )
25685110	MDF 10-CK	10
25685116	MDF 16-CK	16
25685125	MDF 25-CK	25
25685135	MDF 35-CK	35
25685150	MDF 50-CK	50
25685170	MDF 70-CK	70

Trapezoid-crimping dies for wire end sleeve



Order-ref.	INT-Id.	Comp. width	Cross section (mm <sup>2</sup> )
25688010	MTT 10-CK	20	10
25688016	MTT 16-CK	20	16
25688025	MTT 25-CK	20	25
25688035	MTT 35-CK	20	35
25688050	MTT 50-CK	20	50
25688070	MTT 70-CK	20	70
25688095	MTT 95-CK	20	95
25688120	MTT 120-CK	20	120
25688150	MTT 150-CK	20	150

Mandrel-crimping dies for fork terminals to DIN 46234



Order ref.	INT Id.	Cross section (mm <sup>2</sup> )
25685010	MD 10-CK	10
25685016	MD 16-CK	16
25685025	MD 25-CK	25
25685035	MD 35-CK	35
25685050	MD 50-CK	50
25685070	MD 70-CK	70

## Plastic case for crimping dies

60kN tools – C-Form



Description	Order ref.	INT Id.	Dimensions	
Plastic Case for 24 crimping dies	25600081	KKPE-C-CK	410x360x110mm	approx 1.6 kg

## PP130-C – Hydraulic Compression Head 130kN (300mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 300 mm<sup>2</sup> cable cross sections.

The Compression Head must be combined with a hydraulic pump (Maximum pressure 700bar/70MPa). (see Page 244, Hydraulic pump)

### Technical Characteristics:

- Sturdy and compact structure
- C head for easy positioning of dies
- Quick male automatic lock connection and non detachable dust cap
- Max. Stroke: 30mm
- Head opening: 29mm
- Compression Force: 130kN
- Operating pressure: 700bar (70 MPa)



Picture with crimping dies

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	30mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	240/40mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	400mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	300mm <sup>2</sup>
● Oval crimping dies for C branch terminals	50mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	70mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	150mm <sup>2</sup>
● Oval crimping dies for indent connector to DIN 48217	70mm <sup>2</sup>
● Cutting Jaws for armored Al/Cu Cable	Ø 16mm

Crimping dies see Page 228



PP130-C

### Set Equipment:

- Hydraulic Compression Head
- Plastic case for Compression head and maximum 14 crimping dies

Description	Order ref.	INT Id.	Dimensions	⚖
Hydraulic Compression head 130kN Set	25641301	PP130-C	410x360x135mm	approx 5.9 kg
Hydraulic Compression head 130kN without case	25641311	PP130-C-lose	260x125x80mm	approx 4.1 kg
Plastic case	25641380	KKPP130-HC	410x360x135mm	approx 1.6 kg

## PP130-C2 – Hydraulic Compression Head 130kN (300mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 300 mm<sup>2</sup> cable cross sections.

The Compression Head must be combined with a hydraulic pump (Maximum pressure 700bar/70MPa). (see Page 244, Hydraulic pump)

### Technical Characteristics:

- Sturdy and compact structure
- C head for easily positioning the dies
- Quick male automatic lock connection and non detachable dust cap
- Max. Stroke: 38mm
- Head opening: 38mm
- Compression Force: 130kN
- Operating pressure: 700bar (70 MPa)



Picture with crimping dies

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	300mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	300mm <sup>2</sup>
● Oval crimping dies for C branch terminals	50mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	70mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	150mm <sup>2</sup>
● Oval crimping dies for indent-connector to DIN 48217	70mm <sup>2</sup>


Crimping dies see Page 228



PP130-C2

### Set-Equipment:

- Hydraulic Compression Head
- Plastic case for Compression head and maximum 14 crimping dies

Description	Order ref.	INT Id.	Dimensions	
Hydraulic Compression head 130kN Set	25641401	PP130-C2	410x360x135mm	approx 6.5 kg
Hydraulic Compression head 130kN without case	25641411	PP130-C2-lose	280x120x70mm	approx 4.7 kg
Plastic case	25641380	KKPP130-HC	410x360x135mm	approx 1.6 kg

## HPI130-C – Manual Hydraulic Compression Tool 130kN (300mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 300 mm<sup>2</sup> cable cross sections.

### Technical Characteristics:

- Light and compact structure
- C head for easily positioning the dies, rotates 270°
- Quick feed with double hydraulic cylinder
- Single hand use by innerside handle
- Pressure limiter
- Manual return in any position
- Compression force: 130kN
- Max. stroke: 30mm
- Head opening: 29mm
- Operating pressure: 700bar (70MPa)

Sector of use	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	300mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	300mm <sup>2</sup>
● Oval crimping dies for C branch terminals	50mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	70mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	150mm <sup>2</sup>
● Oval crimping dies for indent-connector to DIN 48217	70mm <sup>2</sup>

Crimping dies see Page 228



Picture with crimping dies



HPI130-C

### Set-Equipment:

- Hydraulic Compression tool
- Plastic case for Compression head and maximum 9 crimping dies

Description	Order ref.	INT Id.	Dimensions	⚖
Manual hydraulic compression tool 130kN Set	25641501	HPI130-C	705x270x100mm	approx 8.2 kg
Manual hydr. compression tool 130kN without case	25641511	HP130-C-lose	580x150x80mm	approx. 6.4 kg
Plastic case	25641580	KKHP130-C	705x270x100mm	approx 1.6 kg

## HP130-C3 – Manual Hydraulic Compression Tool 130kN (300mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 300 mm<sup>2</sup> cable cross sections.

### Technical Characteristics:

- Light and compact structure
- Pump body of light weight alloy
- C-Form compression head for easy insertion of dies. Rotates 180°
- Quick feed with double hydraulic cylinder
- Pressure limiter
- Manual return in any position
- Compression force: 130kN
- Max. stroke: 29mm
- Head opening: 29mm
- Operating pressure: 700bar (70MPa)

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	300mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	300mm <sup>2</sup>
● Oval crimping dies for C branch terminals	50mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	70mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	150mm <sup>2</sup>
● Oval crimping dies for indent-connector to DIN 48217	70mm <sup>2</sup>

*Crimping dies see Page 228*



*Picture with crimping dies*



HP130-C3

### Set Equipment:

- Hydraulic Compression tool
- Plastic case for Compression head and maximum 16 crimping dies

Description	Order ref.	INT Id.	Dimensions	⚖
Manual hydraulic compression tool 130kN Set	25641601	HP130-C3	830x280x110mm	approx 7.7 kg
Manual hydr. compression tool 130kN without case	25641611	HP130-C3-loose	536x220x85mm	approx 5.4 kg
Plastic case	25641680	KKHP130-C3	830x280x110mm	approx 2.1 kg

## API130-C – Battery Operated Hydraulic Compression Tool 130kN (300mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 300 mm<sup>2</sup> cable cross sections.

### Technical Characteristics:

- Light and compact structure
- C-Form Compression head with snap closure; rotates 270°
- High speed feed with double hydraulic cylinder
- Pressure release button with single-handed operation (on both sides, for left and right handed operators)
- Rotating plastic grip between the device body and head, for easy and safe handling in any working position
- Fastening ring for shoulder strap
- Ergonomic grip for weight balance and easy and safe operation
- Plastic housing, grip and pressure release button, insulating and shock resistant
- Intelligent electronic tool for the following functions and messages:
  - Continuous battery state control with 10 LEDs (7 green + 2 orange + 1 red)
  - Multifunction LED (with three colours) for:
    - Control of operation and status messages: (green = ok; orange = maintenance/service; red = fault)
    - Control and visualisation of the next maintenance interval
    - Fault messages (for overload, over-current, high temperature, etc)
- Compression force: 130kN
- Head opening: 29mm
- Max. stroke: 30mm



CE

Picture with crimping dies

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	240/40mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	400mm <sup>2</sup>
● Round die for Al and Cu sector shaped conductor	300mm <sup>2</sup>
● Oval crimping dies for C branch terminals	150mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	150mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	150mm <sup>2</sup>
● Oval crimping dies for indent-connector to DIN 48217	70mm <sup>2</sup>

Crimping dies see Page 228



API130-C

### SET Equipment:

- Battery-operated hydraulic cutting tool
- 14.4V/2.6Ah Ni-MH - battery - RA6
- Battery charger - LG6
- Handy grip for safe transport
- Rigid case
- Shoulder strap

### Optional Accessories (see page 44):

- 14.4V/3.0Ah Ni-MH - battery - RA7
- 14.4V/3.6Ah Ni-MH - battery - RA8
- Adapter for supply voltages 230V AC / 115V AC
- Quick battery charger with optical signal - LG5
- Cigar-lighter battery charger - LGZ

Equipment see Page 238

Description	Order ref.	INT Id.	Dimensions	
Battery operated hydr. compr. tool 130kN Set	25641701	API130-C	610x400x140mm	approx 9 kg

## API130-C2 – Battery Operated Hydraulic Compression Tool 130kN (300mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 300 mm<sup>2</sup> cable cross sections.

### Technical Characteristics:

- Light and compact structure
- C-Form Compression head with snap closure; rotates 270°
- High speed feed with double hydraulic cylinder
- Pressure release button with single handed operation (on both sides, for left and right handed operators)
- Rotating plastic grip between the device body and head, for easy and safe handling in any working position
- Fastening ring for shoulder strap
- Ergonomic grip for weight balance and easy and safe operation
- Plastic housing, grip and pressure release button, insulating and shock resistant
- Intelligent electronic tool for the following functions and messages:
  - Continuous battery state control with 10 LEDs (7 green + 2 orange + 1 red)
  - Multifunction LED (with three colours) for:
    - Control of operation and status messages: (green = ok; orange = maintenance/service; red = fault)
    - Control and visualisation of the next maintenance interval
    - Fault messages (for overload, over-current, high temperature, etc)
- Compression force: 130kN
- Head opening: 38mm
- Max. stroke: 38mm



Picture with crimping dies

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	300mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	300mm <sup>2</sup>
● Oval crimping dies for C branch terminals	50mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	70mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	150mm <sup>2</sup>
● Oval crimping dies for indent connector to DIN 48217	70mm <sup>2</sup>

Crimping dies see Page 228



API130-C2

### SET Equipment:

- Battery-operated hydraulic cutting tool
- 14.4V/2.6Ah Ni-MH - battery - RA6
- Battery charger - LG6
- Handy grip for safe transport
- Rigid case
- Shoulder strap

### Optional Accessories (see page 44):

- 14.4V/3.0Ah Ni-MH - battery - RA7
- 14.4V/3.6Ah Ni-MH - battery - RA8
- Adapter for supply voltages 230V AC / 115V AC
- Quick battery charger with optical signal - LG5
- Cigar-lighter battery charger - LGZ

Equipment see Page 238

Description	Order-ref.	INT-Id.	Dimensions	
Battery operated hydr. compr. tool 130kN Set	25641801	API130-C2	610x400x140mm	approx 9.5 kg

## PP130-H – Hydraulic Compression Tool 130kN (300mm<sup>2</sup>)

Designed to crimp terminals and connectors up to 300mm<sup>2</sup> cable cross sections. The Compression Head must be combined with a hydraulic pump (Maximum pressure 700bar/70MPa). (see Page 244, Hydraulic pump)

### Technical Characteristics:

- Sturdy and compact structure
- H-head for easily positioning the dies
- Quick make automatic-lock connection and non detachable dust cap
- Max. Stroke: 30mm
- Head opening: 35mm
- Compression Force: 130kN
- Operating pressure: 700bar (70 MPa)

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	300mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	300mm <sup>2</sup>
● Oval crimping dies for C branch terminals	50mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	70mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	150mm <sup>2</sup>
● Oval crimping dies for indent-connector to DIN 48217	70mm <sup>2</sup>

Crimping dies see Page 228



Picture with crimping dies



PP130-H

### Set-Equipment:

- Hydraulic Compression Head
- Plastic case for Compression head and maximum 14 crimping dies



Adapters and punch for deep throat compression

Description	Order ref.	INT Id.	Dimensions	⚖
Manual hydraulic compression tool 130kN Set	25641901	PP130-H	410x360x135mm	approx 5.2 kg
Manual hydr. compression tool 130kN without case	25641911	PP130-H-loose	270x80x70mm	approx 3.4 kg
Plastic case	25641380	KKPP130-HC	410x360x135mm	approx 1.6 kg

## HPI130-H – Manual Hydraulic Compression Tool 130kN (300mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 300 mm<sup>2</sup> cable cross sections.

### Technical Characteristics:

- Robust and compact structure
- Compression H-head ; rotates 270°
- Quick feed with double hydraulic cylinder
- Single hand use by innerside handle
- Pressure limiter
- Manual return in any position
- Compression force: 130kN
- Max. stroke: 30mm
- Head opening: 29mm
- Operating pressure: 700bar (70MPa)

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	240mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	150/25mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	300mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	300mm <sup>2</sup>
● Oval crimping dies for C branch terminals	50mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	70mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	150mm <sup>2</sup>
● Oval crimping dies for indent connector to DIN 48217	70mm <sup>2</sup>

*Crimping dies see Page 228*



HPI130-H




*Picture with crimping dies*

### Set-Equipment:

- Hydraulic Compression Tool
- Plastic case for Compression head and maximum 11 crimping dies

Adapter and die holder on request

Description	Order ref.	INT Id.	Dimensions	
Manual hydraulic compression tool 130kN Set	25641201	HPI130-H	710x270x100mm	approx 7.4 kg
Manual hydr. compression tool 130kN without case	25641211	HPI130-H-loose	580x155x70mm	approx 5.5 kg
Plastic case	25641280	KKHP130-H	710x270x100mm	approx 1.7 kg

## HP130-H3 – Manual Hydraulic Compression Tool 130kN (300mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 300 mm<sup>2</sup> cable cross sections.

### Technical Characteristics:

- Robust and compact structure
- Pump body in light metal
- Compression H-head ; rotates 180°
- Quick feed with double hydraulic cylinder
- Pressure limiter
- Deep throat compression possible
- Manual return in any position
- Compression force: 130kN
- Max. stroke: 30mm
- Head opening: 35mm
- Operating pressure: 700bar (70MPa)

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	240/40mm <sup>2</sup>
● Hexagon crimping dies similar to DIN	400mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	300mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	150mm <sup>2</sup>
● Oval crimping dies for H branch terminals, double cable shoe	120mm <sup>2</sup>
● Oval crimping dies for compression dead-ends, oval	185mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	185mm <sup>2</sup>
● Strip off insert for Aluminium/Steel ropes	265/35mm <sup>2</sup>

Crimping dies see Page 228



Picture with crimping dies



HP130-H3

### Set-Equipment:

- Hydraulic Compression Tool
- Plastic case for Compression head and maximum 16 crimping dies

Description	Order ref.	INT Id.	Dimensions	⚖
Manual hydraulic compression tool 130kN Set	25641101	HP130-H3	830x280x110mm	approx 5.9 kg
Manual hydr. compression tool 130kN without case	25641111	HP130-H3-loose	540x160x75mm	approx 5.6 kg
Plastic case	25641180	KKHP130-H3	830x280x110mm	approx 2.1 kg

## API130-H – Battery Operated Hydraulic Compression tool 130kN (300mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 300 mm<sup>2</sup> cable cross sections.

### Technical Characteristics:

- Light and compact structure
- Compression head with snap closure; rotates 270°
- Tool head and body completely covered with insulating material (with the exception of the compression area)
- High speed feed with double hydraulic cylinder
- Pressure release button with single handed operation (on both sides, for left and right handed operators)
- Rotating plastic grip between the device body and head, for easy and safe handling in any working position
- Fastening ring for shoulder strap
- Ergonomic grip for weight balance and easy and safe operation
- Plastic housing, grip and pressure release button, insulating and shock resistant
- Intelligent electronic tool for the following functions and messages:
  - continuous battery state control with 10 Leds (7 green + 2 orange + 1 red)
  - multifunction Led (with three colours) for:
    - control of operation and status messages: (green = ok; orange = maintenance/service; red = fault)
    - control and visualisation of the next maintenance interval
    - fault messages (for overload, over-current, high temperature, etc)
- Compression force: 130kN
- Head opening: 35mm
- Max. stroke: 30mm



CE

Picture with crimping dies

### Die Sets

	max.
● Hexagon crimping dies to DIN 48083 Cu	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	300mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	240/40mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	300mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	300mm <sup>2</sup>
● Oval crimping dies for C branch terminals	50mm <sup>2</sup>
● Thorn crimping dies for cable shoe to DIN 46234	70mm <sup>2</sup>
● Trapezoid crimping dies for wire end sleeve	150mm <sup>2</sup>
● Oval crimping dies for indent connector to DIN 48217	70mm <sup>2</sup>

Crimping dies see Page 228



API130-H

### SET Equipment:

- Battery-operated hydraulic cutting tool
- 14.4V/2.6Ah Ni-MH - battery - RA6
- Battery charger - LG6
- Handy grip for safe transport
- Rigid case
- Shoulder strap

### Optional Accessories (see page 44):

- 14.4V/3.0Ah Ni-MH - battery - RA7
- 14.4V/3.6Ah Ni-MH - battery - RA8
- Adapter for supply voltages 230V AC / 115V AC
- Quick battery charger with optical signal - LG5
- Cigar-lighter battery charger - LGZ

Equipment see Page 238

Description	Order ref.	INT Id.	Dimensions	
Battery operated hydr. compr. tool 130kN Set	25641001	API130-H	610x400x140mm	approx 8.5 kg

## Crimping Dies for PP130, HP130, AP130

Hexagon crimping dies according to DIN 48083  
for connectors according to DIN 46235, Cu, Al and Al/St



Order ref.	INT Id.	Code No	Compr.width	Cross section (mm <sup>2</sup> ) Copper		Cross section (mm <sup>2</sup> ) Aluminium stranded		Cross section (mm <sup>2</sup> ) Aluminium-Steel	
				tension free	fulltension	tension free	full tension	Al-Sleeve	St-Sleeve
25671306	MK 6-C	6	5	10					16/2.5 25/4 35/6
25671307	MK 7-C	7	5						50/8
25671308	MK 8-C	8	14	16	10-16				
25671309	MK 9-C	9	5						70/12 95/15
25671310	MK 10-C	10	14	25	25				
25671312	MK 12-C	12	14	35	35	16-25	16-25	16/2.5 25/4	
25671313	U13-K13D MK 13-C	13	12						120/20 150/25
25671314	MK 14-C	14	14	50	50	35	35	35/6	
25671315	MK 15-C	15	12						44/32 50/30 125/30 170/40 185/30 210/35 230/30 240/40 265/35 305/40 340/30 385/35 450/40 495/35 570/40
25671316	MK 16-C	16	14	70	70	50	50	50/8	
25671317	MK 17-C	17	12						210/50 300/50 380/50 510/45 560/50 650/45
25671318	MK 18-C	18	14	95		70	70	70/12	
25671319	U13-K19D MK 19-C	19	12						95/55 435/55
25671320	MK 20-C	20	14	120	95				
25671322	U13-K22D MK 22-C	22	14	150	120	95-120	95		
25671325	MK 25-C	25	14	185	150	150	120	44/32 50/30 120/20	
25671328	MK 28-C	28	7	240					
25671329	MK 28L-C	28	14			185	150/185	125/30 150/25	
25671330	U13-K30D MK 30-C	30	7		185				
25671331	MK 30L-C	30	14					95/55 170/40 185/30	
25671332	U13-K32D MK 32-C	32	7	300		240			
25671333	MK 32L-C	32	17			240			
25671334	MK 34L-C	34	17			300	240	105/75 120/70 210/35 210/50 230/30 240/40	

Thorn crimping dies for cable shoes according to DIN 46234



Order ref.	INT Id.	Cross section (mm <sup>2</sup> )
25670016	MD 16-C	16
25670025	MD 25-C	25
25670035	MD 35-C	35
25670050	MD 50-C	50
25670070	MD 70-C	70
25670095	MD 95-C	95
25670120	MD 120-C	120
25670150	MD 150-C	150

Thorn crimping dies for fine wire conductors



Order ref.	INT Id.	Cross section (mm <sup>2</sup> )
25671016	MDF 16-C	16
25671025	MDF 25-C	25
25671035	MDF 35-C	35
25671050	MDF 50-C	50
25671070	MDF 70-C	70
25671095	MDF 95-C	95
25671120	MDF 120-C	120
25671150	MDF 150-C	150

**On request:** • periodic calibration of DIN-crimping dies with test certificate

## Crimping dies for PP130, HP130, AP130

Hexagon crimping dies for cable shoes and connectors made of copper similar to DIN



Order ref.	INT Id.	Compression width	Cross section (mm <sup>2</sup> )
25674010	MH 10-C	8	10
25674016	MH 16-C	8	16
25674025	MH 25-C	10	25
25674035	MH 35-C	14	35
25674050	MH 50-C	14	50
25674070	MH 70-C	14	70
25674095	MH 95-C	14	95
25674120	MH 120-C	14	120
25674150	MH 150-C	14	150
25674185	MH 185-C	14	185
25674240	MH 240-C	14	240
25674300	MH 300-C	7	300
25674400	MH 400-C	7	400

Trapezoid crimping dies for wire end sleeve



Order ref.	INT Id.	Compression width	Cross section (mm <sup>2</sup> )
25678016	MTT 16-C	20	16
25678025	MTT 25-C	20	25
25678035	MTT 35-C	20	35
25678050	MTT 50-C	26	50
25678070	MTT 70-C	26	70
25678095	MTT 95-C	26	95
25678120	MTT 120-C	26	120
25678150	MTT 150-C	26	150
25678185	MTT 185-C	26	185

Oval Crimping dies for the compression of compression dead-ends and oval connectors according to DIN 48217 and H branch terminals



Order ref.	INT Id.	Comp. width	Cross sections (mm <sup>2</sup> )			H-Clamp Cu
			Dead end clamps and oval Connectors			
			Cu	Al	St	
25676010	MO 10-C	5	10	10		
25676012	MO 12-C	5	16	16		
25676016	MO 16-C	5	25	25		16
25676018	MO 18-C	5	35	35	35	25
25676020	MO 20-C	5	50	50	50	
25676021	MO 21-C	5				35
25676022	MO 22-C	5	70	70	70	
25676024	MO 24-C	5	95	95		
25676025	MO 25-C	5			95	
25676026	MO 26-C	5	120	120		

Strip off insert to strip off Aluminium Steel Ropes



Order ref.	INT Id.	Cross section (mm <sup>2</sup> )
25679050	Al-St 50/8-C	50/8
25679051	Al-St 50/30-C	50/30
25679070	Al-St 70/12-C	70/12
25679095	Al-St 95/15-C	95/15
25679096	Al-St 95/55-C	95/55
25679120	Al-St 120/20-C	120/20
25679150	Al-St 150/25-C	150/25
25679170	Al-St 170/40-C	170/40
25679185	Al-St 185/30-C	185/30
25679210	Al-St 210/35-C	210/35
25679240	Al-St 240/40-C	240/40
25679265	Al-St 265/35-C	265/35

Round dies to round off copper and aluminium sector shaped conductor



Order ref.	INT Id.	Comp. width	Cross section (mm <sup>2</sup> )	
			se	sm
25673010	UP 4,1-C	35	-	10
25673016	UP 5,1-C	35	-	16
25673025	UP 6,3-C	35	35	25
25673035	UP 7,5-C	35	50	35
25673050	UP 9,0-C	35	70	50
25673070	UP 10,5-C	35	95	70
25673095	UP 12,5-C	35	120	95
25673120	UP 14,0-C	35	150	120
25673150	UP 15,7-C	35	185	150
25673185	UP 17,5-C	35	240	185
25673240	UP 20,2-C	35	300	240
25673300	UP 22,5-C	35		300

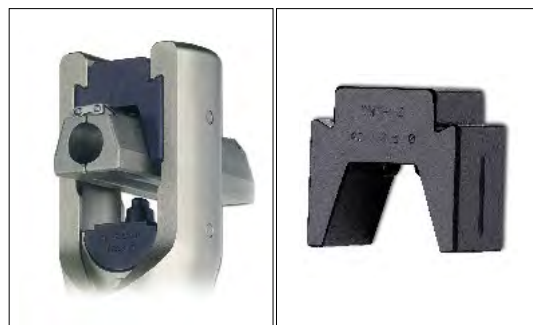
Oval crimping dies for H branch terminals

Order ref.	INT Id.	Cross section (mm <sup>2</sup> )	Comp. width (mm <sup>2</sup> )
25672050	MRH22-C	2 x 50	30
25672070	MRH26-C	2 x 70	30
25672085	MRH30-C	2 x 95	30
25672120	MRH32-C	2 x 120	30

Oval crimping dies for twin cable lugs

Order-ref.	INT-Id.	Cross section (mm <sup>2</sup> )	Comp. width (mm <sup>2</sup> )
25675050	MRD22-C	2 x 50	12
25675070	MRD24-C	2 x 70	12
25675095	MRD29-C	2 x 95	12
25675120	MRD32-C	2 x 120	12

## Female die holding fixture



Description	Order-ref.	INT-Id.	for crimping dies	⚖️
Femal die holding fixture C-form	25677130	AD130-H	C-Form	approx 350
Femal die holding fixture C-form	25677131	AD13-C*	C-Form	approx 470
Femal die holding fixture Tiefnut	25677150	AD13-150	Deep slot crimping	approx 450
Femal die holding fixture Tiefnut	25677240	AD13-240	Deep slot crimping	approx 335

\*only for HP130-H3

## Plastic case for crimping dies

for 24 crimping dies 130kN



Description	Order ref.	INT Id.	Dimensions	⚖️
Plastic case for crimping dies	25600081	KKPE-C-CK	410x360x110mm	approx 1.6 kg

## Plastic case for crimping dies

for crimping dies deep slot crimping



Description	Order ref.	INT Id.	Dimensions	⚖️
Plastic case for crimping dies	25600083	KKPE-TN	410x360x110mm	approx 1.6 kg

## PP230 – Hydraulic Compression Head 230kN (630mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 630 mm<sup>2</sup> cable cross sections.

The Compression Head must be combined with a hydraulic pump (Maximum pressure 700bar/70MPa). (see Page 244, Hydraulic pump)

### Technical Characteristics:

- Sturdy and compact structure
- Openable head to make it easy to position and insert the crimping dies
- Quick make automatic-lock connection and undetachable dust cap
- Max. Stroke: 28mm
- Head opening: 50mm
- Compression Force: 230kN
- Operating pressure: 700bar (70 MPa)

Sector of use	max.
● Hexagon crimping dies to DIN 48083 Cu	630mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	500mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	385/35mm <sup>2</sup>
● Hexagon crimping dies for fork terminal similar to DIN	630mm <sup>2</sup>
● Round die for Al and Cu sector-shaped conductor	300mm <sup>2</sup>
● Oval crimping dies for H brach terminal, twin comp. cable lugs	150mm <sup>2</sup>
● Strip off insert for Aluminium/Steel ropes up to 20mm	30mm

Crimping dies see Page 232



CE


Picture with crimping dies



PP230

### Set Equipment:

- Hydraulic Compression Tool
- Plastic case for Compression head and maximum 6 crimping dies

Description	Order ref.	INT Id.	Dimensions	
Hydraulic compression head 230kN Set	25742301	PP230	410x360x135mm	approx 7.3 kg
Hydraulic compression head 230kN without case	25742311	PP230-lose	320x130x85mm	approx 5.6 kg
Plastic case	25742380	KKPP230	410x360x135mm	approx 1.6 kg

## Crimping Dies for PP230



Crimping dies according to DIN 48083  
for connectors according to DIN 46235, Cu, Al and Al/St

Order ref.	INT Id.	Code No.	Comp. width	Cross Section (mm <sup>2</sup> ) Copper		Cross Section (mm <sup>2</sup> ) Aluminium stranded		Cross Section (mm <sup>2</sup> ) Aluminium-Steel	
				tension free	full tension	tension free	full tension	Al-Sleeve	St-Sleeve
25792310	MK 10-3D	10	14	25	25				
25792312	MK 12-3D	12	14	35	35	16-25	16-25	16/2.5 25/4	
25792313	MK 13-3D	13	14						120/20 150/25
25792314	MK 14-3D	14	14	50	50	35	35	35/6	
25792315	MK 15-3D	15	14						44/32 50/30 125/30 170/40 185/30 210/35 230/30 240/40 265/35 305/40 340/30 385/35 450/40 495/35 570/40
25792316	MK 16-3D	16	14	70	70	50	50	50/8	
25792317	MK 17-3D	17	14						210/50 300/50 380/50 510/45 560/50 650/45
25792318	MK 18-3D	18	14	95		70	70	70/12	
25792319	MK 19-3D	19	14						95/55 435/55
25792320	MK 20-3D	20	14	120	95				
257792321	MK 21-3D	21	14						105/75 120/70 490/65 550/70
25792322	MK 22-3D	22	14	150	120	95-120	95		
25792324	MK 22B-3D	22	40			95-120	95	95/15	
25792323	MK 23-3D	23	14						680/85
25792325	MK 25-3D	25	14	185	150	150	120		
25792326	MK 25B-3D	25	40			150	120	44/32 50/30 120/20	
25792328	MK 28-3D	28	14	240		185	150-185		
25792329	MK 28B-3D	28	40			185	150-185	125/30 150/25	
25792330	MK 30-3D	30	17		185				
25792331	MK 30B-3D	30	25					95/55 170/40 185/30	
25792332	MK 32-3D	32	17	300		240			
25792333	MK 32B-3D	32	25			240			
25792334	MK 34-3D	34	17		240	300	240		
25792335	MK 34B-3D	34	25			300	240	105/75 120/70 210/35 210/50 230/30 240/40	
25792338	MK 38-3D	38	17	400		400	300		
25792339	MK 38B-3D	38	25			400	300	265/35 300/50 305/40 340/30	
25792342	MK 42-3D	42	17	500					
25792343	MK 42B-3D	42	25					380/50 385/35	
25792344	MK 44-3D	44	17	630		500			

**On request:** • periodic calibration of DIN crimping dies with test certificate



Thorn crimping dies for fine wire conductors

Cutting Jaw

Order ref.	INT Id.	Cross section (mm <sup>2</sup> )
25795120	MDF 120-3D	120
25795150	MDF 150-3D	150
25795185	MDF 185-3D	185
25795240	MDF 240-3D	240
25795300	MDF 300-3D	300

Order ref.	INT Id.	Application
25795020	WT 2-3D	Circular cutting insert to cut Cu, Al cables; Aldrey Al/St ropes up to 20mm Ø
25795030	WT 3-3D	Flat cutting insert to cut earth electrode and flat band steel up to 30 mm wide

## Crimping dies for PP230



Crimping die for notch connector

Copper		Aluminium		Al-St-rop		Cross sec. (mm <sup>2</sup> )
Order ref.	INT Id.	Order ref.	INT Id.	Order ref.	INT Id.	
25790010	MKO 10-3D Cu					10
25790016	MKO 16-3D Cu					16
25790025	MKO 25-3D Cu	25790026	MKO 25-3D Al			25
25790035	MKO 35-3D Cu	25790036	MKO 35-3D Al			35
25790050	MKO 50-3D Cu	25790053	MKO 50-3D Al			50
				25790051	MKO 50/8-3D	50/8
				25790052	MKO 50/30-3D	50/30
				25790071	MKO 70/12-3D	70/12
25790070	MKO 70-3D Cu	25790072	MKO 70-3D Al			70
25790095	MKO 95-3D Cu	25790097	MKO 95-3D Al			95
				25790096	MKO 95/15-3D	95/15
25790120	MKO 120-3D Cu	25790122	MKO 120-3D Al			120
				25790121	MKO 120/21-3D	120/21
				25790125	MKO 125/30-3D	125/30
25790150	MKO 150-3D Cu	25790152	MKO 150-3D Al			150
				25790151	MKO 150/25-3D	150/25
		25790187	MKO 185-3D Al			185
				25790186	MKO 185/32-3D	185/32
		25790241	MKO 240-3D Al			240
				25790210	MKO 210/36-3D	210/36
				25790211	MKO 210/50-3D	210/50
				25790240	MKO 240/40-3D	240/40

Hexagon crimping dies for cable shoes and connectors made of copper similar to DIN



Order ref.	INT Id.	Compression width	Cross section (mm <sup>2</sup> )
25774120	MH 120-3D	14	120
25774150	MH 150-3D	14	150
25774185	MH 185-3D	14	185
25774240	MH 240-3D	17	240
25774300	MH 300-3D	17	300
25774400	MH 400-3D	17	400
25774500	MH 500-3D	17	500
25774625	MH 625-3D	17	630

Oval crimping die for H-branch terminals



Order ref.	INT Id.	Cross section (mm <sup>2</sup> )	Comp. width (mm)
25772050	MRH22-3D	2 x 50	30
25772070	MRH26-3D	2 x 70	30
25772095	MRH30-3D	2 x 95	30
25772120	MRH32-3D	2 x 120	30
25772150	MRH34-3D	2 x 150	30

Round dies to round off copper and aluminium sector shaped conductor



Order ref.	INT Id.	Comp. width	Cross section (mm <sup>2</sup> )	
			se	sm
25673010	UP 4.1-C *	35	-	10
25673016	UP 5.1-C *	35	-	16
25673025	UP 6.3-C *	35	35	25
25673035	UP 7.5-C *	35	50	35
25673050	UP 9.0-C *	35	70	50
25673070	UP 10.5-C *	35	95	70
25673095	UP 12.5-C *	35	120	95
25673120	UP 14.0-C *	35	150	120
25673150	UP 15.7-C *	35	185	150
25673185	UP 17.5-C *	35	240	185
25673240	UP 20.2-C *	35	300	240
25673300	UP 22.5-C *	35		300

Oval crimping die for twin comp. cable lugs



Order ref.	INT Id.	Cross section (mm <sup>2</sup> )	Comp. width (mm)
25775050	MRD22-3D	2 x 50	12
25775070	MRD24-3D	2 x 70	12
25775095	MRD29-3D	2 x 95	12
25775150	MRD32-3D	2 x 120	12

\* to use with Adapter AD230-130

## Adapter for Crimping Dies 130kN

•this adapter allows use of all dies (C-Form) for the tool 130kN on model PP230 .



Description	Order ref.	INT Id.	for crimping dies	
Adapter for crimping dies	25695001	AD230-130	C-Form	approx 820

## PP520 – Hydraulic Compression Head 520kN (1000mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 1000 mm<sup>2</sup> cable cross sections.

The Compression Head must be combined with a hydraulic pump (Maximum pressure 700bar/70MPa). (see Page 244, Hydraulic pump)

### Technical Characteristics:

- Sturdy and compact structure
- Openable head to make it easy to position and insert the crimping dies
- Quick make automatic lock connection and undetachable dust cap
- Max. Stroke: 25mm
- Head opening: 62mm
- Compression Force: 520kN
- Operating pressure: 700bar (70 MPa)



Picture with crimping dies

Sector of use	max.
● Hexagon crimping die according to DIN 48083 Cu	1000mm <sup>2</sup>
● Hexagon crimping die according to DIN 48083 Al	1000mm <sup>2</sup>
● Hexagon crimping die according to DIN 48083 Al/St.	680/85mm <sup>2</sup>


Crimping die see Page 235



PP520

### Set Equipment:

- Hydraulic Compression Tool
- Plastic case for Compression head and maximum 4 crimping dies

Description	Order ref.	INT Id.	Dimensions	
Hydraulic compression head 520kN Set	25644601	PP520	410x360x130mm	approx 12 kg
Hydraulic compression head 520kN without case	25644611	PP520-lose	262x190x115mm	approx 10.4 kg
Plastic case	25644688	KKPP520	410x360x130mm	approx 1.5 kg

## Crimping dies for PP520

Hexagon crimping dies according to DIN 48083 for connectors according to DIN 46235, Cu, Al and Al/St



Order ref.	INT Id.	Code No	Comp.width	Copper		Cross section (mm <sup>2</sup> ) Aluminium stranded		Aluminium-Steel	
				tension free	full tension	tension free	full tension	Al-Sleeve	St-Sleeve
25794512	MK 12-520	12	14	35	35	16-25	16-25	16/2.5 25/4	
25794513	MK 13-520	13	14						120/20 150/25
25794515	MK 15-520	15	14						44/32 50/30 125/30 170/40 185/30 210/35 230/30 240/40 265/35 305/40 340/30 385/35 450/40 495/35 570/40
25794517	MK 17-520	17	14						210/50 300/50 380/50 510/45 560/50 650/45
25794519	MK 19-520	19	14						95/55 435/55
25794520	MK 20-520	20	14	120	95				
25794521	MK 21-520	21	14						105/75 120/70 490/65 550/70
25794522	MK 22-520	22	14	150	120				
25794524	MK 22B-520	22	40			95-120	95	95/15	
25794523	MK 23-520	23	14						680/85
25794525	MK 25-520	25	14	185	150				
25794526	MK 25B-520	25	40			150	120	44/32 50/30 120/20	
25794528	MK 28-520	28	14	240					
25794529	MK 28B-520	28	40			185	150-185	125/30 150/25	
25794530	MK 30-520	30	17		185				
25794531	MK 30B-520	30	40					95/55 170/40 185/30	
25794532	MK 32-520	32	17	300					
25794533	MK 32B-520	32	40			240			
25794534	MK 34-520	34	17		240				
25794535	MK 34B-520	34	40			300	240	105/75 120/70 210/35 210/50 230/30 240/40	
25794538	MK 38-520	38	17	400					
25794539	MK 38B-520	38	40			400	300	265/35 300/50 305/40 340/30	
25794542	MK 42-520	42	17	500					
25794543	MK 42B-520	42	40					380/50 385/35	
25794544	MK 44-520	44	17	630					
25794545	MK 44B-520	44	40			500			
25794546	MK 46-520	46	25		500				
25794547	MK 46B-520	46	40					435/55 450/40	
25794550	MK 50-520	50	25		630				
25794551	MK 50B-520	50	40					495/35 510/45 490/65	
25794552	MK 52-520	52	25	800					
25794553	MK 52B-520	52	40			630		570/40 580/50 550/70	
25794558	MK 58-520	58	25	1000		800		650/45 680/85	
25794560	MK 60-520	60	25			1000			

**On request:** • periodic calibration of DI N crimping dies with test certificate

### Adapter for crimping dies 130kN

with this adapter you can use all crimping dies (C-Form) of the 130kN tools with the compression head PP520.



Description	Order ref.	INT Id.	for crimping dies	
Hexagon crimping die DIN48083	25695002	AD520-130	C-Form	approx 2.25 kg

## PP1000 – Hydraulic Compression Head 1000kN(1600mm<sup>2</sup>)

Designed to crimp terminals and connectors up to a maximum of 1600 mm<sup>2</sup> cable cross sections.

The Compression Head must be combined with a hydraulic pump (Maximum pressure 700bar/70MPa). (see Page 244, Hydraulic pump)

### Technical Characteristics:

- Sturdy and compact structure
- Openable head to make it easy to position and insert the crimping dies
- Quick hydraulic connection and undetachable dust cap
- Max. Stroke: 30mm
- Compression Force: 1000kN
- Operating pressure: 850bar (85 MPa)



Picture with crimping dies

Die Sets	max.
● Hexagon crimping dies to DIN 48083 Cu	1600mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al	1600mm <sup>2</sup>
● Hexagon crimping dies to DIN 48083 Al/St.	1045/45mm <sup>2</sup>

Crimping dies see Page 237

Description	Order ref.	INT Id.	Dimensions	
Hydraulic Compression Head 1000kN	25641011	PP1000	530x350x290mm	approx 61 kg

## RPW185 – Hydraulic tool for tube compression


Designed to seal off steel and PE pipes fast and safety with diameters up to 100 mm. The tool is also suitable for crimping water pipes made off steel during emergencies.

The hydraulic tool can be combined with a hydraulic pump (Maximum pressure 850bar/85MPa). (see Page 244, Hydraulic pump)

### Technical Characteristics:

- Sturdy and compact structure
- Head opens to grip around pipe
- High working and occupational safety easy handling
- Quick hydraulic connection and undetachable dust cap
- Compression Force: 185kN
- Operating Pressure: 850bar (85MPa)



Description	Order ref.	INT Id.	Dimensions	
Hydraulic tool for tube compression	25618511	RPW185	575x245x95mm	approx 14.5 kg
Stop valve	25618515	RPWAV		
Spacer Ser for PE-Pipes	25618516	RPWDIS		

## Compression tool

### Crimping dies for PP 1000

Hexagon crimping dies according to DIN 48083  
for connectors according to DIN 46235, Cu, Al und Al/St



Order ref.	INT Id.	Code No.	Compr. width	Cross sections (mm <sup>2</sup> ) Copper		Cross sections (mm <sup>2</sup> ) Aluminium stranded		Cross sections (mm <sup>2</sup> ) Aluminium-Steel	
				tension free	full tension	tension free	full tension	Al-Sleeve	St-Sleeve
25791013	MK 13-1000	13	25						120/20 150/25
25791015	MK 15-1000	15	25						44/32 50/30 125/30 170/40 185/30 210/35 230/30 240/40 265/35 305/40 340/30 385/35 450/40 495/35 570/40
25791017	MK 17-1000	17	25						210/50 300/50 380/50 510/45 560/50 650/45 1045/45
25791019	MK 19-1000	19	25						95/55 435/55
25791021	MK 21-1000	21	25						105/75 120/70 490/65 550/70
25791023	MK 23-1000	23	25						680/85
25791025	MK 25-1000	25	25	185	150				
25791026	MK 25B-1000	25	40					44/32 50/30 120/20	
25791028	MK 28-1000	28	25	240					
25791029	MK 28B-1000	28	40			185	150-185	125/30 150/25	
25791030	MK 30-1000	30	25		185				
25791031	MK 30B-1000	30	40					95/55 170/40 185/30	
25791034	MK 34-1000	34	25		240				
25791035	MK 34B-1000	34	40			300	240	105/75 120/70 210/35 210/50 230/30 240/40	
25791038	MK 38-1000	38	25	400					
25791039	MK 38B-1000	38	40			400	300	265/35 300/50 305/40 340/30	
25791042	MK 42-1000	42	25	500					
25791043	MK 42B-1000	42	40					380/50 385/35	
25791046	MK 46-1000	46	25		500				
25791047	MK 46B-1000	46	40					435/55 450/40	
25791050	MK 50-1000	50	25		630				
25791051	MK 50B-1000	50	40					495/35 510/45 490/65	
25791052	MK 52-1000	52	25	800					
25791053	MK 52B-1000	52	40			630		570/40 560/50 550/70	
25791058	MK 58-1000	58	25	1000					
25791059	MK 58B-1000	58	40			800		650/45 680/85	
25791061	MK 60B-1000	60	40			1000			
25791063	MK 62B-1000	62	60					1045/45	

**Accessory available:**

**Storage Battery**



RA4

RA5

Description	Order ref.	INT Id.
Storage Battery 12V / 2.6Ah Ni-MH	25800024	RA4
Storage Battery 12V / 3.0Ah Ni-MH	25800025	RA5
Storage Battery 14.4V / 2.6Ah Ni-MH	25800026	RA6
Storage Battery 14.4V / 3.0Ah Ni-MH	25800027	RA7



RA6

RA7

**Fast Battery Charger**

Description	Order-ref.	INT-Id.
Battery Charger (max. charging time 50 min.)	25800104	LG4
Fast Battery Charger (with opt. charging light , max. charging time ca. 20 min.)	25800105	LG5
Battery Charger (charging time 30-75 min.)	25800104	LG6



LG6

**Battery Charger**

Description	Order-ref.	INT-Id.
Battery Charger (12 V source)	25800110	LGZ



**Adapter**

Description	Order-ref.	INT-Id.
Adapter for mains operation 230V AC/115V A	25800109	NG1



**Strap**

Description	Order-ref.	INT-Id.
Strap (for hydraulic battery operated tools)	25800171	TG1
Strap (for hydraulic battery operated tools)	25800172	TG2



TG1

TG2

## BLS-120 - Power Rail Work Station

Designed to bend, perforate, cut and bend bus bars in copper or aluminium up to 120 x 12mm. The work station must be combined with a hydraulic pump (Maximum pressure 700bar/70MPa). (see Page 244, Hydraulic pump)

### Technical Characteristics:

- Sturdy and compact, suitable for use in workshops and on construction sites
- Composed of a base unit and a variety of work tools, interchangeable depending on the task being performed
- Simple and quick tool changing
- The electrical proximity switch guarantees 100% bending repeatability
- The work bench adjusts in height with a side stop to make holes without tracing and measuring
- Quick automatic-lock connection of hydraulics and undetachable dust cap
- Cutting tool for clean burr-free cuts by special shape of the blade
- Exact dimensional bending of bow in one operation
- Perforates and cuts laminated power rails and earthing strips
- Force generated: max. 185kN
- Operating pressure: 700bar (70MPa)
- Bus bar width: up to 120mm
- Bus bar thickness: up to 12mm



Description	Order ref.	INT Id.	Dimensions	
Power rail work station	25900011	BLS-120	480x500x360mm	approx 53 kg

### Accessories :

#### Bending tool



**ATTENTION:** The necessary bending female die BLS-M must be ordered separately.

Description	Order ref.	INT Id.	Bending radius	Bending angle	
Bending punch R 5	25901005	BLS-R5	R5mm	up to 110°	approx 4 kg
Bending punch R 8	25901008	BLS-R8	R8mm	up to 110°	approx 4.1 kg
Bending punch R10	25901010	BLS-R10	R10mm	up to 110°	approx 4.4 kg
Bending punch R20	25901020	BLS-R20	R20mm	up to 110°	approx 5 kg
Back-bending punch	25901030	BLS-RB			approx 3.8 kg

#### Bending female die



Description	Order ref.	INT Id.	Power Rail dimensions	
Bending female die	25901090	BLS-M	up to 120 x 12mm	approx 3.3 kg

#### Cutting tool




Description	Order ref.	INT Id.	Power Rail dimensions	
Cutting tool for massive power rails	25902001	BLS-S	up to 120 x 12mm	approx 5.8 kg

## Cutting Tool




**ATTENTION:** This cutting tool is not designed to cut massive bus bars.

Description	Order ref.	INT Id.	Bus bars dimensions	
Cutting tool for laminated power rails	25902002	BLS-SL	up to 120 x 12mm	approx 9 kg

## Offset Shaping Tool



Description	Order ref.	INT Id.	Bus bars dimensions	
Offset Shaping Tool	25902003	BLS-K	up to 120 x 12mm	approx 11 kg

## Perforation Tool I

### Technical Characteristics:

- For large bus bars
- Round hole: Ø 6,0 to 21,0mm
- Longitudinal slot: 5,5 x 11 to 17 x 20mm



Description	Order ref.	INT Id.	Power Rail dimensions	
Perforation tool I for massive power rails	25903000	BLS-L	up to 120 x 12mm	approx 4.3 kg

Description	Round hole Ø	Order ref. female die	INT Id.	Order ref. Punch	INT Id.
• Round hole-punch and female die for massive rails	6.0mm	25903060	LSR06.0M	25913060	LSR06.0S
	6.5mm	25903065	LSR06.5M	25913065	LSR06.5S
	7.0mm	25903070	LSR07.0M	25913070	LSR07.0S
	8.0mm	25903080	LSR08.0M	25913180	LSR08.0S
	8.5mm	25903085	LSR08.5M	25913185	LSR08.5S
	9.0mm	25903090	LSR09.0M	25913090	LSR09.0S
	10.0mm	25903100	LSR10.0M	25913100	LSR10.0S
	10.5mm	25903105	LSR10.5M	25913105	LSR10.5S
	11.0mm	25903110	LSR11.0M	25913110	LSR11.0S
	12.0mm	25903120	LSR12.0M	25913120	LSR12.0S
	12.5mm	25903125	LSR12.5M	25913125	LSR12.5S
	13.0mm	25903130	LSR13.0M	25913130	LSR13.0S
	13.5mm	25903135	LSR13.5M	25913135	LSR13.5S
	14.0mm	25903140	LSR14.0M	25913140	LSR14.0S
	14.5mm	25903145	LSR14.5M	25913145	LSR14.5S
	15.0mm	25903150	LSR15.0M	25913150	LSR15.0S
	16.0mm	25903160	LSR16.0M	25913160	LSR16.0S
	17.0mm	25903170	LSR17.0M	25913170	LSR17.0S
	18.0mm	25903180	LSR18.0M	25913180	LSR18.0S
	18.5mm	25903185	LSR18.5M	25913185	LSR18.5S
	19.0mm	25903190	LSR19.0M	25913190	LSR19.0S
19.5mm	25903195	LSR19.5M	25913195	LSR19.5S	
20.0mm	25903200	LSR20.0M	25913200	LSR20.0S	
21.0mm	25903210	LSR21.0M	25913210	LSR21.0S	



Description	Longitudinal slot	Order-ref. female die	INT Id.	Order ref. Punch	INT Id.
• Longitudinal slot punch and female die for massive rails	5.5x11.0mm	25908055	LSL05.5x11.0M	25918055	LSL05.5x11.0S
	6.5x13.0mm	25908065	LSL06.5x13.0M	25918065	LSL06.5x13.0S
	9.0x18.0mm	25908090	LSL09.0x18.0M	25918090	LSL09.0x18.0S
	11.0x20.0mm	25908110	LSL11.0x20.0M	25918110	LSL11.0x20.0S
	12.5x20.0mm	25908125	LSL12.5x20.0M	25918125	LSL12.5x20.0S
	13.0x17.0mm	25908130	LSL13.0x17.0M	25918130	LSL13.0x17.0S
	13.0x20.0mm	25908135	LSL13.0x20.0M	25918135	LSL13.0x20.0S
	14.0x20.0mm	25908140	LSL14.0x20.0M	25918140	LSL14.0x20.0S
	17.0x20.0mm	25908170	LSL17.0x20.0M	25918170	LSL17.0x20.0S



## Perforation tool IV

### Technical Characteristics:

- For solid and laminated bus bars
- Perforation near the isolation possible (min. 5mm) by step in the tool
- Round hole: Ø 6.5 to 21.0mm
- Longitudinal slot: 6.5 x 13 to 17 x 20mm



Description	Order ref.	INT Id.	Power Rail dimensions	
Perforation tool IV for laminated and solid rails	25904000	BLS-L4	bis 120 x 12mm	approx 4.3 kg

## Round hole punch and female die for laminated and solid bus bars



Description	Ø	Order ref. female die	INT Id.	Order ref. punch	INT Id.	Order ref. stripper	INT Id.
• Round hole punch and female dies for laminated and solid bus bars	6.5mm	25904065	LS4R06.5M	25914065	LS4R06.5S	25924065	LS4R06.5N
	7.0mm	25904070	LS4R07.0M	25914070	LS4R07.0S	25924070	LS4R07.0N
	8.5mm	25904085	LS4R08.5M	25914085	LS4R08.5S	25924085	LS4R08.5N
	9.0mm	25904090	LS4R09.0M	25914090	LS4R09.0S	25924090	LS4R09.0N
	10.0mm	25904100	LS4R10.0M	25914100	LS4R10.0S	25924100	LS4R10.0N
	10.5mm	25904105	LS4R10.5M	25914105	LS4R10.5S	25924105	LS4R10.5N
	11.0mm	25904110	LS4R11.0M	25914110	LS4R11.0S	25924110	LS4R11.0N
	12.0mm	25904120	LS4R12.0M	25914120	LS4R12.0S	25924120	LS4R12.0N
	13.0mm	25904130	LS4R13.0M	25914130	LS4R13.0S	25924130	LS4R13.0N
	14.0mm	25904140	LS4R14.0M	25914140	LS4R14.0S	25924140	LS4R14.0N
	14.5mm	25904145	LS4R14.5M	25914145	LS4R14.5S	25924145	LS4R14.5N
	15.0mm	25904150	LS4R15.0M	25914150	LS4R15.0S	25924150	LS4R15.0N
	17.0mm	25904170	LS4R17.0M	25914170	LS4R17.0S	25924170	LS4R17.0N
	18.0mm	25904180	LS4R18.0M	25914180	LS4R18.0S	25924180	LS4R18.0N
	19.0mm	25904190	LS4R19.0M	25914190	LS4R19.0S	25924190	LS4R19.0N
	21.0mm	25904210	LS4R21.0M	25914210	LS4R21.0S	25924210	LS4R21.0N

## Longitudinal hole punch and female dies for laminated and solid bus bars



Description	Ø mm	Order ref. female die	INT Id.	Order ref. punch	INT Id.	Order ref. stripper	INT Id.
• Round hole-punch and female dies for laminated and solid bus bars	6.5x13.0	25905065	LS4L06.5x13.0M	25915065	LS4L06.5x13.0S	25925065	LS4L06.5x13.0N
	10.5x13.0	25905105	LS4L10.5x13.0M	25915105	LS4L10.5x13.0S	25925105	LS4L10.5x13.0N
	8.5x16.0	25905085	LS4L08.5x16.0M	25915085	LS4L08.5x16.0S	25925085	LS4L08.5x16.0N
	6.5x21.0	25905165	LS4L06.5x21.0M	25915165	LS4L06.5x21.0S	25925165	LS4L06.5x21.0N
	8.0x20.0	25905080	LS4L08.0x20.0M	25915080	LS4L08.0x20.0S	25925080	LS4L08.0x20.0N
	9.0x20.0	25905090	LS4L09.0x20.0M	25915090	LS4L09.0x20.0S	25925090	LS4L09.0x20.0N
	13.0x17.0	25905013	LS4L13.0x17.0M	25915013	LS4L13.0x17.0S	25925013	LS4L13.0x17.0N
	11.0x20.0	25905011	LS4L11.0x20.0M	25915011	LS4L11.0x20.0S	25925011	LS4L11.0x20.0N
	13.0x20.0	25905113	LS4L13.0x20.0M	25915113	LS4L13.0x20.0S	25925113	LS4L13.0x20.0N
	14.0x20.0	25905014	LS4L14.0x20.0M	25915014	LS4L14.0x20.0S	25925014	LS4L14.0x20.0N
	17.0x20.0	25905017	LS4L17.0x20.0M	25915017	LS4L17.0x20.0S	25925017	LS4L17.0x20.0N

## LSK120 – Hydraulic Punching Head


Designed to punch bus bars rails (dimensions up to 120 x 12mm) made of copper, aluminium or steel with tensile strength up to 470N/mm<sup>2</sup>.

The Hydraulic Punching Head must be combined with a hydraulic pump (Maximum pressure 700bar/70MPa). (see Page 244, Hydraulic pump)

### Technical Characteristics:

- Strong and compact structure
- “C” Head for easy positioning of the power rails.
- Easy insertion of inserts (die and punch)
- Also useable on mounted bus bars without disassembly
- Quick automatic-lock connection and undetachable dust cap
- Centrally punched holes in bars up to 120 mm wide
- Functional range for the following bars:
  - Cu/Al to bar thickness 12mm max. Ø 21.0mm
  - Steel to bar thickness 8mm max. Ø 21.0mm
  - Steel to bar thickness 9mm max. Ø 19.5mm
  - Steel to bar thickness 12mm max. Ø 14.0 mm
- Punching Force: max. 218kN
- Operating pressure: 700bar (70MPa)



Description	Order ref.	INT Id.	Dimensions	
Hydraulic Punching Head	25900021	LSK120	234x174x88mm	approx 9.3 kg

## Round hole punch and female die for solid power bus bars


Description	Ø	Punch: Order ref.	INT Id.	Stripper: Order ref..	INT Id.
• Round hole punch and female dies for solid rails	6.0mm	25903060	LSR06.0M	25913060	LSR06.0S
	6.5mm	25903065	LSR06.5M	25913065	LSR06.5S
	7.0mm	25903070	LSR07.0M	25913070	LSR07.0S
	8.0mm	25903080	LSR08.0M	25913080	LSR08.0S
	8.5mm	25903085	LSR08.5M	25913085	LSR08.5S
	9.0mm	25903090	LSR09.0M	25913090	LSR09.0S
	10.0mm	25903100	LSR10.0M	25913100	LSR10.0S
	10.5mm	25903105	LSR10.5M	25913105	LSR10.5S
	11.0mm	25903110	LSR11.0M	25913110	LSR11.0S
	12.0mm	25903120	LSR12.0M	25913120	LSR12.0S
	12.5mm	25903125	LSR12.5M	25913125	LSR12.5S
	13.0mm	25903130	LSR13.0M	25913130	LSR13.0S
	13.5mm	25903135	LSR13.5M	25913135	LSR13.5S
	14.0mm	25903140	LSR14.0M	25913140	LSR14.0S
	14.5mm	25903145	LSR14.5M	25913145	LSR14.5S
	15.0mm	25903150	LSR15.0M	25913150	LSR15.0S
	16.0mm	25903160	LSR16.0M	25913160	LSR16.0S
	17.0mm	25903170	LSR17.0M	25913170	LSR17.0S
	18.0mm	25903180	LSR18.0M	25913180	LSR18.0S
	18.5mm	25903185	LSR18.5M	25913185	LSR18.5S
	19.0mm	25903190	LSR19.0M	25913190	LSR19.0S
19.5mm	25903195	LSR19.5M	25913195	LSR19.5S	
20.0mm	25903200	LSR20.0M	25913200	LSR20.0S	
21.0mm	25903210	LSR21.0M	25913210	LSR21.0S	



## Optional Accessories


### Trolley / Trestle for Bus Bar Work Station



Description	Order ref.	INT Id.	Dimensions	
Trolley for Bus Bar Work Station	25900001	BLS-W	800x500x750mm	approx 45 kg
Trestle for Bus Bar Work Station	25900002	BLS-B	800x440mm	approx 5 kg

### Plastic case for BLS-Tools (Accessories)



Description	Order ref.	INT Id.	Dimensions	
Plastic case for BLS Tools (Accessories)	25900080	AC-BLS-WZG	-	-

### Metaflux Spray for Cutting and Punching

enhance the service life of punching and cutting tools



Description	Order ref.	INT Id.	Inhalt ml	
Cutting and Punching Spray Metaflux	25900090	SPRAYM	400	approx 450

## FPI70 / FPI85 – Foot Operated Hydraulic Pump

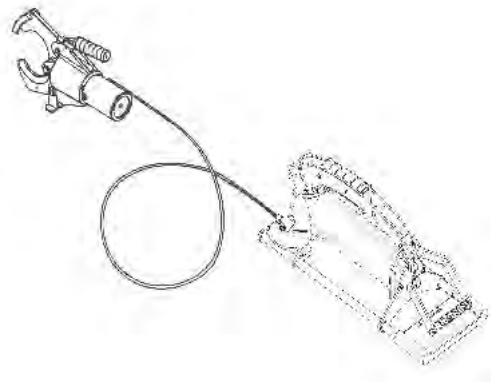
Designed to operate hydraulic heads with up to 700bar or 850bar pressure (70MPa/85MPa).

### Technical Characteristics:

- Compact Dimensions
- Lightweight due to use of light alloys and corrosion-resistant materials
- Handy and stable due to a firm fitting pedal and sturdy non slip base
- Automatic two speed device (fast advancing under no-load and slow under load)
- Pressure monitoring by oil pressure gauge
- Manual pressure release at any time
- High mounted quick release coupling with dust cap
- Operating pressure: 700bar/850bar (70MPa)/(85MPa)
- Low pressure pump capacity: 18,3cm<sup>3</sup>/Hub
- High pressure pump capacity: 2cm<sup>3</sup>/Hub
- Oil quantity: 1200ml
- Operating temperature: -10°C to +40°C



Design FPI70:




Metal case for pedal operated pump

### Set-Equipment:

- Pedal Operated Pump
- Metal case

Accessories see Page 246

Description	Order ref.	INT Id.	Dimensions	
Foot operated hydraulic pump 700bar	25007001	FPI70	550x350x180mm	approx 14 kg
Foot operated hydraulic pump 850bar	25007005	FPI85	320x260x180mm	approx 14 kg
Metal case for pedal operated pump	25090080	BKFP170	550x350x180mm	approx 3 kg

## ANP 24/220 – Combined Electro hydraulic Battery and Mains Pump

Designed to operate hydraulic tools up to 700bar (70MPa).

### Technical Characteristics:

- Battery-operated or mains-operated
- High pump performance in 2 stages (fast and slow)
- Remote control push-button
- Manual pressure release at any time
- Automatic pressure release when maximum force is achieved
- Engine brake operates when pressure released
- Fitted battery charger with battery condition indicator
- Quick automatic-lock hydraulic connection and undetachable dust cap
- Compact design, light weight
- Pump capacity: 0.4l/min – 0.7l/min
- Mains voltage: 230V - 50Hz
- Cell voltage: 2 x 12V
- Motor rating: 360W
- Protection class: IP43
- Operating temperature: -10°C to +40°C


### Equipment:

- electro-hydraulic battery-mains pump
- Remote control push button with 5m connecting cable
- Power cord 3m
- Carrying shoulder strap with shoulder pads



CE

Accessories see Page 246

Description	Order-ref.	INT-Id.	Dimensions	
Pump for battery and power supply	25007511	ANP24/220	325x345x225mm	approx 20 kg

## NP220-1 and NP220-2 – Mains Operated Hydraulic Pump

Designed to operate hydraulic tools up to 700bar (70MPa).

### Technical Characteristics:

- Mains-operated
- High pump performance by 2 stages (fast and slow only NP220-2)
- High pump performance in application of large cross-sections and power rails processing
- Protection support
- Remote control push-button
- Oil check by external sensor
- Engine brake operates when pressure released
- Quick automatic-lock connection and undetachable dust cap
- Pump capacity: 0.6l/min (NP220-1)  
0.6l/min – 1.1l/min. (NP220-2)
- Mains voltage: 230V - 60Hz
- Motor rating: 750W
- Protection class: IP54
- Operating temperature: -10°C to +40°C

### Bestückung:


- Mains-operated hydraulic pump – NP220-1 or NP220-2
- Remote control push-button with 5m connecting cable
- Power cord 3m

**On request:** *Special models (ANP24/220; NP220-1; NP220-2) with different mains voltage and operating-pressures up to a maximum of 850bar (85MPa).*



CE


Accessories see Page 246

Description	Order ref.	INT Id.	Dimensions	
Pump 1 stage for power supply	25008011	NP220-1	370x185x490mm	approx 25 kg
Pump 2 stage for power supply	25008211	NP220-2	370x185x490mm	approx 25 kg

## Flexible Hose

- Flexible High Pressure Hoses for connecting heads to pumps
- Cannot be used with insulated cable shears
- Quick male and female automatic locking connections mounted on the ends and with related protective plugs



Description	Order ref.	INT Id.	Length	
Hydraulic Hose 3m without armour	25080003	SCH3	3m	1.2 kg
Hydraulic Hose 5m without armour	25080005	SCH5	5m	1.5 kg
Hydraulic Hose 10m without armour	25080010	SCH10	10m	2.3 kg
Hydraulic Hose 3m with armour	25080103	SCHA3	3m	1.5 kg
Hydraulic Hose 5m with armour	25080105	SCHA5	5m	1.7 kg
Hydraulic Hose 10m with armour	25080110	SCHA10	10m	3.1 kg

## Foot Operated Switch

for hydraulic Pumps ANP24/220, NP220-1, NP220-2 and BLS

Description	Order ref.	INT Id.
Foot Operated Switch	25081000	FS01



## Voltage Transformer

- to power the hydraulic pump ANP24/220 from an external 12V-source
- 12V DC - 230V AC - 50Hz

Description	Order ref.	INT Id.
Voltage Transformer	25081200	SW12/220



## Storage Battery for Hydraulic Pump

(for ANP24/220)

Description	Order ref.	INT Id.
Storage Battery for ANP24/220	25081400	EA24-1



## Accessory Bag

for hydraulic hose, storage battery and other accessories

Description	Order ref.	INT Id.
Accessory Bag for hydraulic tools	25081600	TTPZ01



## Remote Control Extension Cable

Extension cable for hand or foot operation

Description	Order ref.	INT Id.
Remote Control Extension Cable	25081800	KABEL5



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