

BERNSTEIN-Pliers are made from specially selected top-quality special steels. The blanks are drop-forged and are then further processed in accordance with the latest production techniques.

BERNSTEIN pliers are oil-hardened and all cutting pliers additionally undergo subsequent induction hardening. All pliers are carefully produced for the cutting capacities indicated, either with a side face for cutting hard and soft wire or without a side face for flush cutting soft wire only. The cutting capacities of all electronic pliers are indicated on the handles.

All BERNSTEIN pliers are guaranteed tools. Defective pliers will be replaced if they contain material or production defects.

## Special design features

Most BERNSTEIN pliers for electronic engineers are produced with a **box joint**.

As a result of this expensive design, optimum parallel guiding edges is obtained and the service lives are long.

The production of a **lap joint**

or a **lay-on joint**

is made according to the type of pliers and the use.



## Cutting shape and capacity

### with side face (Semi Flush)

suitable for hard and soft steel wire as well as soft materials, e.g. copper wire. The result of the final cut is a pyramidal tip at the end of the wire



### without side face (Flush)

nearly flush cut with finest cutting edges, only for soft steel wires and copper wires; cut slightly shock-resistant, the cut leaves a minimal rise at the end of the wire



### fully without side face (Ultra Flush)

cut is absolutely flush due to extremely sharp cutting edges, only for soft steel and copper wires, being the ultimate in conformance to tough soldering and mechanical shock specification



### special side face

for cutting glass fibre, e.g. Kevlar etc..



The lifetime of the cutting edges depends on the sharpness of the tips. The stronger the tips (fully without side face) the faster the wear. So far no flush and shock-resistant cut is required, it is better to take pliers with side face.

## Finishes

BERNSTEIN-pliers are supplied as standard in the following finishes:

**Bright-polished chrome-plated**  
**Fine-polished and bright-burnished**  
**Bright steel-polished**  
**Nickel-plated**  
**Burnished**  
**Stainless, fine polished**

Additional insulation or other types of finish are indicated by a suffix after the article number

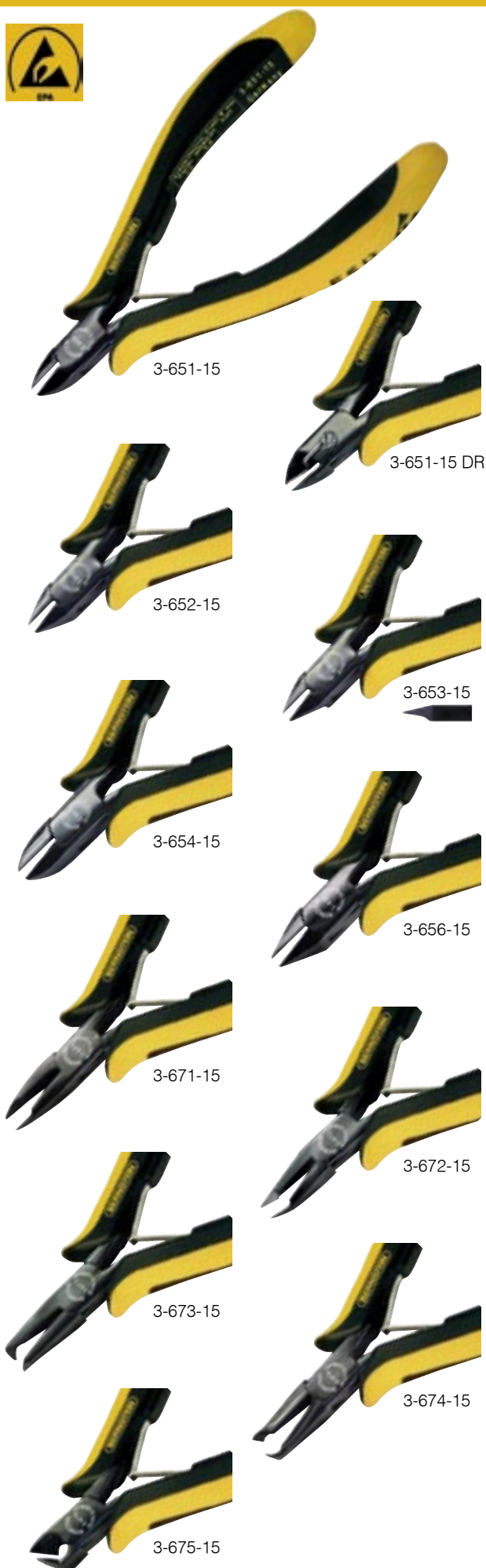
Finish	No.suffix
<b>chrome-plated, polished</b>	without
with transparent hand-guard (=BERNSTEINIT-insulation)	-1
with transparent or coloured insulation	-2
with conductive black hand-guard	-13
<b>nickel-plated</b>	
with transparent hand-guard (=BERNSTEINIT-insulation)	-4
with coloured insulation	-6
<b>steel-polished</b>	
with conductive black hand-guard	-13
<b>burnished</b>	-10
with conductive black hand-guard	-7
with coloured insulation	-12
<b>bright-burnished, and fine-polished</b>	
with yellow-grey hand-guard	-14
with conductive black-yellow hand-guard	-15
<b>Safety insulation</b>	
VDE-safety insulation	-VDE
two-colour multilayered safety insulation	-VDE
<b>ESD-insulations</b>	
conductive black coating	-7
conductive black hand-guard	-13
conductive black-yellow hand-guard	-15

Only the finishes indicated in the descriptions of the pliers are available from stock, all other finishes are available on request.

## Packing

All pliers are supplied in skin packs as standard. Packing in plastic bags can also be selected if required. Both are for recycling. Quantities of 10 pairs of pliers per type are packed in a 3-coloured covered box and are clearly labelled.





## SPECIAL ELECTRONIC PLIERS EUROline-Conductive

Box joint 

Double leaf spring

High quality steel

Fine polished and bright burnished, for dazzle free working

Ergonomically formed bicoloured hand-guard from

**conductive** anti-slide material

The pliers of this program have been tested with good results by several testing laboratories adequate to DIN EN 61340-5-1, 61340-2-1, 61340-2-3 for work in ESD protected areas

## CUTTING PLIERS

No.	Length		Finish	cutting capacity mm Ø			Weight g
	mm	inches		Copper-wire	Soft wire	Hard wire	

### Mini side cutters EUROline-Conductive

with very slim, rounded head for finest operations

3-651-15	120	4 3/4	without side face	1.2	0.6	-	65
3-651-15 DR	120	4 3/4	without side face, with retaining spring	1.2	0.6	-	65

### Mini side cutters EUROline-Conductive

with very slim, pointed head for finest operations

3-652-15	120	4 3/4	without side face	1.0	0.6	-	60
3-653-15	120	4 3/4	without side face, with special flat cutting edge	1.0	0.6	-	60

### Side cutters EUROline-Conductive

with slim, rounded head,

3-654-15	125	5	with side face	1.5	1.0	0.4	70
3-655-15	125	5	without side face	1.5	1.0	-	70

### Side cutters EUROline-Conductive

with slim, pointed head,

3-656-15	125	5	with side face	1.2	1.0	0.4	70
3-657-15	125	5	without side face	1.2	1.0	-	70

### End cutters EUROline-Conductive

extremely slim, without side face, for precision work at points difficult to reach

3-671-15	130	5 1/8	straight	0.6	-	-	65
3-672-15	130	5 1/8	cutting edge 20° angular	0.6	-	-	70

### Top cutters EUROline-Conductive

extremely slim, without side face, head 45° angular, for flush cutting directly in front of and behind the components.

3-673-15	130	5 1/8	cutting edge inside	0.6	-	-	60
3-674-15	130	5 1/8	cutting edge outside	0.6	-	-	60

### Oblique top cutters EUROline-Conductive

cutting plane 29° angular, flush cutting for horizontal and vertical use

3-675-15	115	4 1/2	without side face	1.2	1.0	0.4	65
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## SPECIAL ELECTRONIC PLIERS EUROline-Conductive

### CUTTING PLIERS



No.	Length		Finish	cutting capacity mm Ø			Weight g
	mm	inches		Medium hard wire	Hard wire	Piano- wire	

#### Carbide mini side cutters EUROline-Conductive

for continuous heavy work, **with inserted carbide cutting edges**,  
**only** for tough nickel and electrode wires

3-661-15	120	4 3/4	with side face very slim rounded head	1.2	1.0	0.6	70
3-663-15	120	4 3/4	with side face very slim pointed head with special flat cutting edge	0.6	0.5	-	65



3-661-15

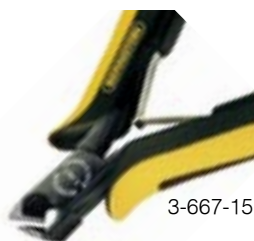


3-663-15

#### Carbide oblique top cutters EUROline-Conductive

for continuous heavy work, **with inserted carbide cutting edges**,  
cutting plane 29° angular, for horizontal and vertical use,  
**only** for tough nickel and electrode wires

3-667-15	115	4 1/2	without side face	0.6	0.5	0.3	65
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3-667-15



3-665-15

#### Glas fibre mini side cutters EUROline-Conductive

for continuous heavy work, **with inserted carbide cutting edges**,  
with special side face, **for cutting glass fibre only**, max. Ø 2.0 mm

3-665-15	120	4 3/4	very slim rounded head				70
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### ROUND, FLAT, SNIPE NOSE PLIERS

No.	Length		Finish	Weight g
	mm	inches		

#### Round nose pliers EUROline-Conductive

extremely slim

3-681-15	130	5 1/8	short plain jaws	60
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3-682-15



3-681-15

#### Flat nose pliers EUROline-Conductive

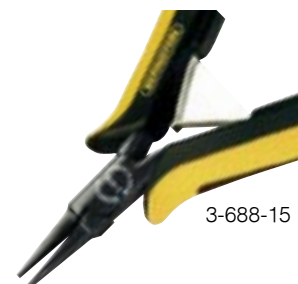
extremely slim

3-682-15	130	5 1/8	short plain jaws	70
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3-688-15	130	5 1/8	short, <b>ultra slim</b> plain jaws	60
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3-683-15



3-688-15

#### Snipe nose pliers EUROline-Conductive

extremely slim

3-683-15	130	5 1/8	short plain jaws	70
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3-685-15	140	5 1/2	long plain jaws	70
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3-686-15	140	5 1/2	long serrated jaws	70
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3-687-15	130	5 1/8	short plain jaws, <b>ultra slim pointed</b> for precise handling of tiny components	70
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3-687-15



3-685-15