

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.

BERNSTEIN pliers without side faces are marked with a dot on the head of the pliers. In the case of pliers for electronic engineers, the cutting capacities are indicated on the handle.

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 decision to produce a **lap joint**



or a **lay-on joint**



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

## 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**

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
with yellow-grey hand-guard	-20
<b>nickel-plated</b>	-3
with transparent hand-guard (=BERNSTEINIT-insulation)	-4
with coloured hand-guard insulation	-5
with coloured insulation	-6
<b>steel-polished</b>	
with coloured hand-guard insulation	-8
with coloured insulation	-9
with conductive black hand-guard	-13
<b>burnished</b>	-10
with coloured insulation	-12
<b>bright-burnished, 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 insulation	-VDE
<b>ESD/EGB-insulations</b>	
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 a well-known electronic group adequate to IEC 61340



3-651-15



3-651-15 DR



3-652-15



3-653-15



3-654-15



3-656-15



3-671-15



3-672-15



3-673-15



3-674-15

## 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	-	55
3-651-15 DR	120	4 3/4	without side face, with retaining spring	1.2	0.6	-	55

### 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	-	55
3-653-15	120	4 3/4	without side face, with special flat cutting edge	1.0	0.6	-	55

### Side cutters EUROline-Conductive

with slim, rounded head, available with or without side face

3-654-15	125	5	<b>with side face</b>	1.5	1.0	0.4	60
3-655-15	125	5	<b>without side face</b>	1.5	1.0	-	60

### Side cutters EUROline-Conductive

with slim, pointed head, available with or without side face

3-656-15	125	5	<b>with side face</b>	1.2	1.0	0.4	60
3-657-15	125	5	<b>without side face</b>	1.2	1.0	-	60

### 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	-	-	60
3-672-15	130	5 1/8	cutting edge 20° angular	0.6	-	-	60

### 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