

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 guaranted tools. Defective pliers will be replaced if they contain material or production defects.

Special design features

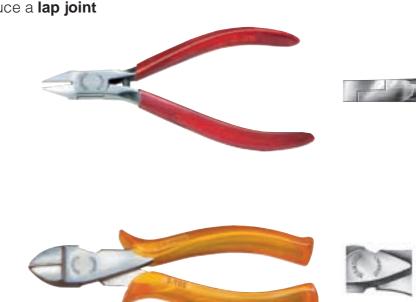
Most BERNSTEIN pliers for electronic engineers are produced with a **box joint**.



As a result of this expensive design, optimum parallel guiding edges is obtained and the service lifes 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
chrome-plated, polished with transparent hand-guard (=BERNSTEINIT-insulation) with transparent or coloured insulation with conductive black hand-guard with yellow-grey hand-guard	without -1 -2 -13 -20
nickel-plated with transparent hand-guard (=BERNSTEINIT-insulation) with coloured hand-guard insulation with coloured insulation	-3 -4 -5 -6
steel-polished with coloured hand-guard insulation with coloured insulation with conductive black hand-guard burnished with coloured insulation	-8 -9 -13 -10 -12
bright-burnished, fine-polished with yellow-grey hand-guard with conductive black-yellow hand-guard	-14 -15
Safety insulation VDE-safety insulation two-colour multilayered insulation	-VDE -VDE
ESD/EGB-insulations conductive black hand-guard conductive black-yellow hand-guard	-13 -15

Only the finishes indicated in the discriptions 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

behind the components.

130

 $5^{1/8}$

5 1/8

3-673-15

3-674-15

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

No.		ngth	Finish	Copper-	Soft	city mm (Hard	Weigh
	mm	inches		wire	wire	wire	g
			JROline-Condu	ctive	:		
,	,		for finest operations				
3-651-15	120	$4^{3}/_{4}$	without side facee	1.2	0.6	-	55
3-651-15 DF	R 120	4 ³ / ₄	without side face, with retaining spring	1.2	0.6	-	55
			JROline-Condu	ctive)		
3-652-15	, pointe 120	4 ³ / ₄	or finest operations without side face	1.0	0.6		55
3-653-15	120	4 ³ / ₄	without side face,	1.0	0.6		55
3-000-10	120	4 /4	with special flat cutting				55
0:1 44		LIDOI	ine-Conductive				
Side cutt	ers ∟	URUI	ine-conductive	7			
with slim, rou	nded he	ead,		7			
with slim, rour available with	nded he or with	ead, out side	face		1.0	0.4	60
with slim, rour available with 3-654-15	nded he or with 125	ead, out side 5	face with side face	1.5	1.0	0.4	60 60
with slim, rour available with	nded he or with	ead, out side	face		1.0	0.4	60 60
with slim, rouse available with 3-654-15 3-655-15	nded he or with 125 125	ead, out side 5 5	face with side face	1.5 1.5		0.4	
with slim, rour available with 3-654-15 3-655-15	nded he or with 125 125 ers Ented he	ead, out side 5 5	face with side face without side face ine-Conductive	1.5 1.5		0.4	
with slim, rour available with 3-654-15 3-655-15 Side cutt with slim, poir	nded he or with 125 125 ers Ented he	ead, out side 5 5	face with side face without side face ine-Conductive	1.5 1.5		0.4	
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with slim, rour available with 3-654-15 3-655-15 Side cutt with slim, poir available with 3-656-15 3-657-15	ers Ented he or with 125 125 ers Ented he or with 125 125	ead, out side 5 5 SUROI ad, out side 5 5	face with side face without side face ine-Conductive face with side face	1.5	1.0	-	60
with slim, rour available with 3-654-15 3-655-15 Side cutt with slim, poir available with 3-656-15 3-657-15 End cutte	ers Ented he or with 125 125 ers Ented he or with 125 125 ers Ented he, without 125 125 ers Ented he, without 125 ers Ented he or with 125 125 ers Ented he, without 125 ers Ented he or with 125 ers Ented he ers En	ead, out side 5 5 UROI ad, out side 5 5	face with side face without side face ine-Conductive face with side face without side face ne-Conductive ace, for precision	1.5	1.0	-	60
with slim, rour available with 3-654-15 3-655-15 Side cutt with slim, poir available with 3-656-15 3-657-15 End cutte extremely slin	ers Ented he or with 125 125 ers Ented he or with 125 125 ers Ented he, without 125 125 ers Ented he, without 125 ers Ented he or with 125 125 ers Ented he, without 125 ers Ented he or with 125 ers Ented he ers En	ead, out side 5 5 UROI ad, out side 5 5	face with side face without side face ine-Conductive face with side face without side face ne-Conductive ace, for precision	1.5	1.0	-	60
with slim, rour available with 3-654-15 Side cutt with slim, poir available with 3-656-15 3-657-15 End cutte extremely slin work at points	ers Ented he or with 125 125 ers Ented he or with 125 125 ers Ented he of with 125 125	ead, out side 5 5 5 CUROI ad, out side 5 5 5 CUROII ut side full to rea	face with side face without side face ine-Conductive face with side face without side face without side face ace, for precision ch	1.5 1.5	1.0	-	60

cutting edge inside 0.6

cutting edge outside 0.6

60

60