

INTERNATIONAL STANDARD

**ISO
9654**

First edition
1989-12-01

Pliers and nippers for electronics — Single-purpose nippers — Cutting nippers

Pinces pour l'électronique — Pinces unifonction — Pinces coupantes

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ISO 9654:1989

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Reference number
ISO 9654 : 1989 (E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 9654 was prepared by Technical Committee ISO/TC 29, *Small tools*.

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Pliers and nippers for electronics — Single-purpose nippers — Cutting nippers

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1 Scope

This International Standard specifies the principal dimensions of single-purpose cutting nippers for electronics and the range of diameters of test wires to be used to verify the functional performance of these nippers in accordance with ISO 9656. The general technical requirements are given in ISO 9657.

The cutting nippers illustrated in this International Standard are only examples and are not intended to affect the manufacturer's design.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated

were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1337:1980, *Wrought coppers (having minimum copper contents of 99,85 %) — Chemical composition and forms of wrought products.*

ISO 8979:1988, *Pliers and nippers for electronics — Nomenclature.*

ISO 9656:1989, *Pliers and nippers for electronics — Test methods.*

ISO 9657:1989, *Pliers and nippers for electronics — General technical requirements.*

3 Dimensions

3.1 End cutting nippers

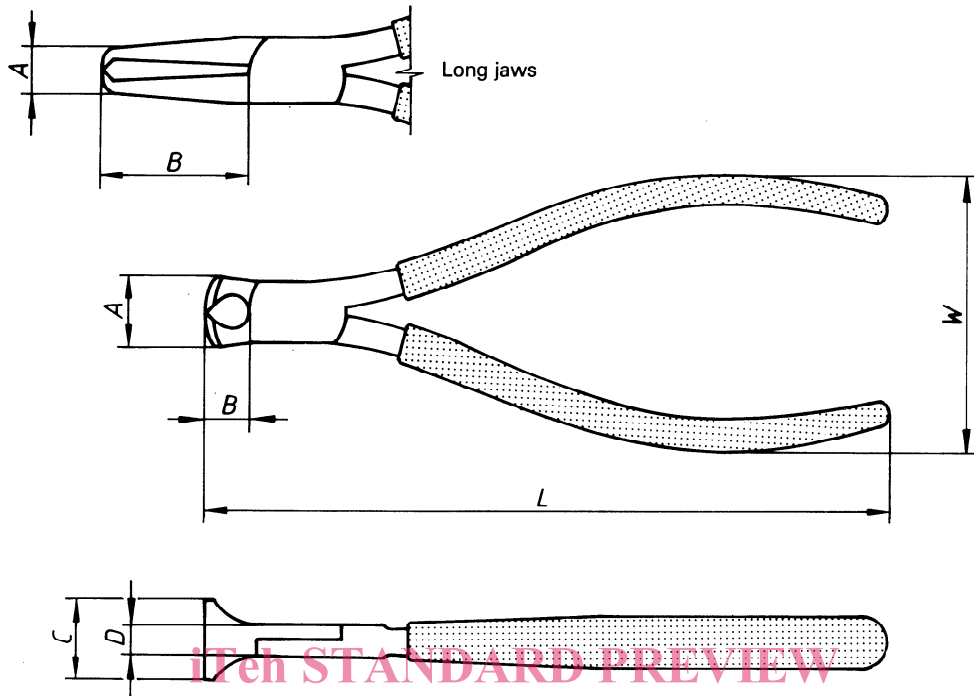


Figure 1

ISO 9654:1989
 Table 1
<https://standards.iteh.ai/catalog/standards/sist/0a9c793f-8e54-4a5c-979-4a2374d86c49/iso-9654-1989>
 Dimensions in millimetres

Length of jaws	L	A max.	B	C max.	D max.	W ± 5
Short jaws	112 ± 5	12,5	9 max.	22	9	48
Long jaws	125 ± 7	7	14 min.	8	9	50
	160 ± 8	7	36 min.	10	10	50

Nippers without sleeves shall conform to the same dimensions.

Table 2

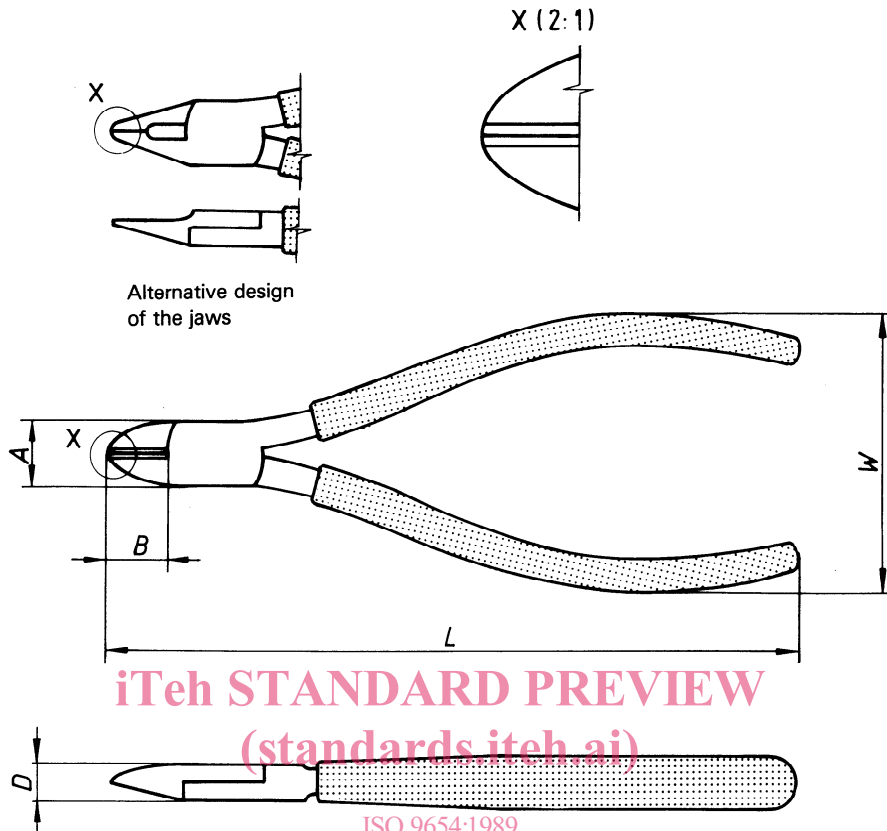
Dimensions in millimetres

Length of jaws	L	Diameter of test wire ¹⁾					
		min.	max.	min.	max.	min.	max.
		Cutting edges ²⁾					
		standard bevelled		semi-flush		flush	
Short jaws	112	0,3	1,25	0,3	1,25	0,2	1
Long jaws	125	0,3	0,8	0,3	0,8	0,2	0,8
	160	0,3	0,8	0,3	0,8	0,2	0,8

1) Data for the test wire are given in ISO 1337.

2) For the design of these three types of cutting edge, see ISO 8979:1988, reference Nos. 1.3.1, 1.3.2 and 1.3.3.

3.2 Diagonal cutting nippers



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Figure 2

Table 3
 Dimensions in millimetres

<i>L</i>	<i>A</i> max.	<i>B</i> max.	<i>D</i> max.	<i>W</i> ± 5
112 ± 5	12,5	16	8	48
125 ± 7	16	20	10	50

Nippers without sleeves shall conform to the same dimensions.

Table 4
 Dimensions in millimetres

<i>L</i>	Diameter of test wire ¹⁾					
	min.		max.		max.	
	Cutting edges ²⁾					
	standard bevelled		semi-flush		flush	
112	0,3	1,25 ³⁾	0,3	1,25 ³⁾	0,2	1
125	0,3	2	0,3	2	0,2	1,5

1) Data for the test wire are given in ISO 1337.
 2) For the design of these three types of cutting edge, see ISO 8979: 1988, reference Nos. 1.3.1, 1.3.2 and 1.3.3.
 3) 1 max. for nippers with pointed and relieved jaws.

3.3 Oblique cutting nippers

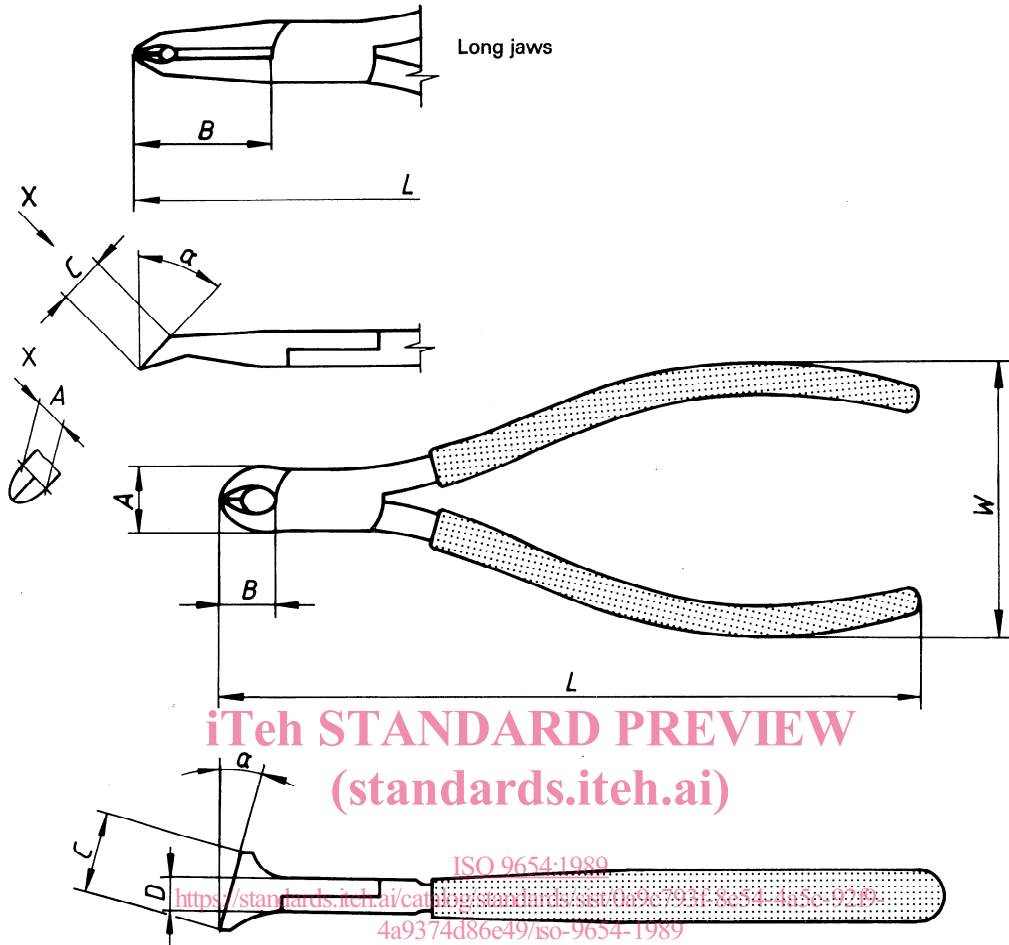


Figure 3

Table 5

Linear dimensions in millimetres

Length of jaws	L	A max.	B max.	C max.	D max.	W ± 5	α $\pm 5^\circ$
Short jaws	112 ± 5	14	14	20	8	48	15°
Long jaws	125 ± 7	8	25	10	8	50	45°

Nippers without sleeves shall conform to the same dimensions.

Table 6

Dimensions in millimetres

Length of jaws	L	Diameter of test wire ¹⁾					
		min.	max.	min.	max.	min.	max.
		Cutting edges ²⁾					
		standard bevelled		semi-flush		flush	
Short jaws	112	0,3	1,25	0,3	1,25	0,2	1
Long jaws	125	0,3	0,8	0,3	0,8	0,2	0,8

1) Data for the test wire are given in ISO 1337.
 2) For the design of these three types of cutting edge, see ISO 8979: 1988, reference Nos. 1.3.1, 1.3.2 and 1.3.3.

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