International Standard ISO 5749

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Pliers and nippers — Diagonal cutting nippers — Dimensions

Pinces et tenailles — Pinces coupantes diagonales — Dimensions

First edition — 1982-12-01

UDC 621.881.4 **Ref. No. ISO 5749-1982 (E)**

Descriptors : tools, cutting tools, hand tools, pliers, dimensions.

Price based on 3 pages

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

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.

International Standard ISO 5749 was developed by Technical Committee ISO/TC 29, *Small tools*, and was circulated to the member bodies in April 1979.

It has been approved by the member bodies of the following countries :

Australia	Hungary	Romania
Austria	India	South Africa, Rep. of
Belgium	Israel	Spain
Bulgaria	Italy	Sweden
Canada	Japan	Switzerland
Chile	Korea, Dem. P. Rep. of	USSR
France	Libyan Arab Jamahiriya	Yugoslavia
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The member bodies of the following countries expressed disapproval of the document on technical grounds :

Czechoslovakia
United Kingdom
USA

Printed in Switzerland

Pliers and nippers — Diagonal cutting nippers — Dimensions

1 Scope and field of application

This International Standard lays down the principal dimensions of diagonal cutting nippers and specifies the test values for the pliers in order to verify their aptitude to function in conformity with ISO 5744. General technical requirements are given in ISO 5743.

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

2 References

ISO 5743, *Pliers and nippers — General technical requirements.* [1)]

ISO 5744, *Pliers and nippers — Methods of test.* [1)]

1) At present at the stage of draft.

3 Diagonal cutting nippers for hard wire

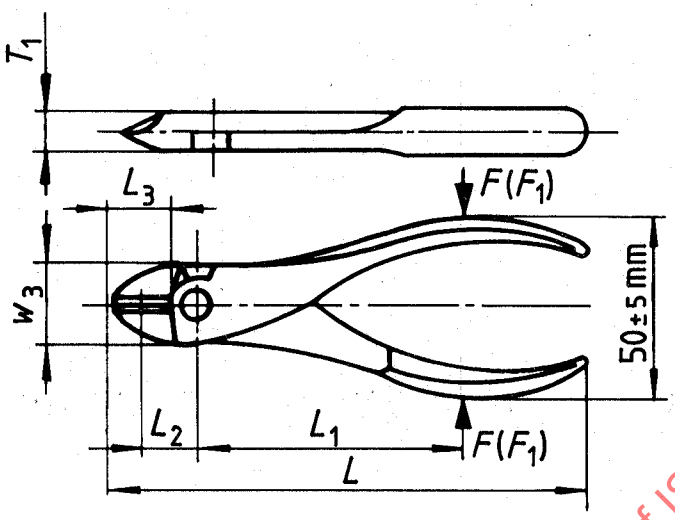

Figure 1

Table 1

Dimensions in millimetres

L	L_3 max.	w_3 max.	T_1 max.
125 ± 6	18	22	10
140 ± 7	20	25	11
160 ± 8	22	28	12
180 ± 9	25	32	14
200 ± 10	28	36	16

Cutting nippers shall be tested in accordance with ISO 5744.

After the load test, the permanent set (s) shall not exceed the value given in table 2. If the distance L_1 is not suitable for the load test, the following formula may be applied :

$$F' = \frac{F \times L_1}{L'_1}$$

where

F' is the load which is not given in table 2;

F is the load given in table 2;

L_1 is the distance from the centre of the joint rivet to the applied load given in table 2;

L'_1 is the measured distance from the centre of the joint rivet to the applied load.

The maximum cutting force (F_1) and the diameter (D) of the test wire shall not exceed the values given in table 2.

Table 2

L	L_1	L_2	Hard test wire diameter (D) [1]	Maximum cutting force (F_1)	Load test	
					load (F)	maximum permanent set (s) [2]
mm	mm	mm	mm	N	N	mm
125	80	10	1,25	500	800	0,5
140	90	11	1,4	575	900	0,5
160	100	12,5	1,6	700	1 000	1
180	112	14	1,8	850	1 120	1
200	125	16	2	1 020	1 250	1

1) Data for hard test wire are given in ISO 5744.

2) $s = w_1 - w_2$ (See ISO 5744.)

Nippers having a lever ratio differing from the values given in table 2 may be checked for compliance with the following formula :

$$F'_1 = \frac{F_2 \times 2 \times L'_2}{L'_1}$$

where

F'_1 is the maximum cutting force which is not given in table 2;

F_2 is the cutting force of hard test wire (see ISO 5744);

2 is the correction factor for hard test wire;

L'_1 is the measured distance from the centre of the joint rivet to the applied load;

L'_2 is the measured distance from the centre of the joint rivet to the location of the test wire.

4 Diagonal cutting nippers for medium hard wire

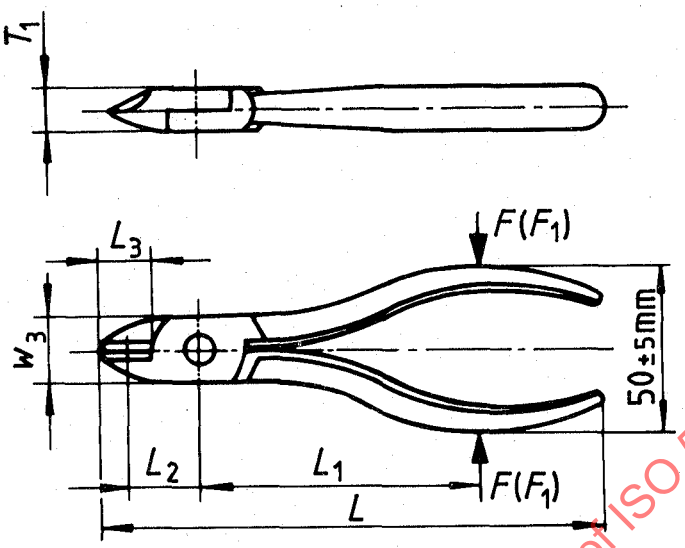

Figure 2

Table 3

Dimensions in millimetres

L	L_3 max.	w_3 max.	T_1 max.
125 ± 6	18	22	10
160 ± 8	22	28	12

Cutting nippers shall be tested in accordance with ISO 5744.

After the load test, the permanent set (s) shall not exceed the value given in table 4. If the distance L_1 is not suitable for the load test, the following formula may be applied :

$$F' = \frac{F \times L_1}{L_1'}$$

where

F' is the load which is not given in table 4;

F is the load given in table 4;

L_1 is the distance from the centre of the joint rivet to the applied load given in table 4;

L_1' is the measured distance from the centre of the joint rivet to the applied load.

The maximum cutting force (F_1) and diameter (D) of the test wire shall not exceed the values given in table 4.

Table 4

L	L_1	L_2	Medium hard test wire diameter (D) [1]	Maximum cutting force (F_1)	Load test	
					load (F)	Maximum permanent set (s) [2]
mm	mm	mm	mm	N	N	mm
125	80	12,5	1,6	450	800	0,5
160	100	16	1,6	460	1 000	1

1) Data for medium hard test wire are given in ISO 5744.

2) $s = w_1 - w_2$ (See ISO 5744.)

Nippers having a lever ratio differing from the values given in table 4 may be checked for compliance with the following formula :

$$F_1' = \frac{F_2 \times 1{,}6 \times L_2'}{L_1'}$$

where

F_1' is the maximum cutting force which is not given in table 4;

F_2 is the cutting force of medium hard test wire (see ISO 5744);

1,6 is the correction factor for medium hard test wire;

L_1' is the measured distance from the centre of the joint rivet to the applied load;

L_2' is the measured distance from the centre of the joint rivet to the location of the test wire.