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Pliers and nippers — Engineer's and Lineman's pliers — Dimensions and test values

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 10, *Assembly tools for screws and nuts, pliers and nippers*.

This fourth edition cancels and replaces the third edition (ISO 5746:2004), which has been technically revised.

The main changes compared to the previous edition are as follows:

— additional nominal length for engineer's pliers;

— introduction of minimum and maximum lengths for each nominal length;

— small adjustments according to the Renard series.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Pliers and nippers — Engineer's and Lineman's pliers — Dimensions and test values

1 Scope

This document specifies the principal dimensions of engineer's and Lineman's pliers and 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 engineer's and Lineman's pliers illustrated in this document are examples only and are not intended to affect the manufacturer's design.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 5743, *Pliers and nippers — General technical requirements*

ISO 5744:2004, *Pliers and nippers — Methods of test*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Dimensions and test values

4.1 Engineer's pliers

The main dimensions of engineer's pliers are shown in Figure 1 and given in Table 1.

Engineer's pliers can be made with or without a joint cutter, at the manufacturer's discretion.

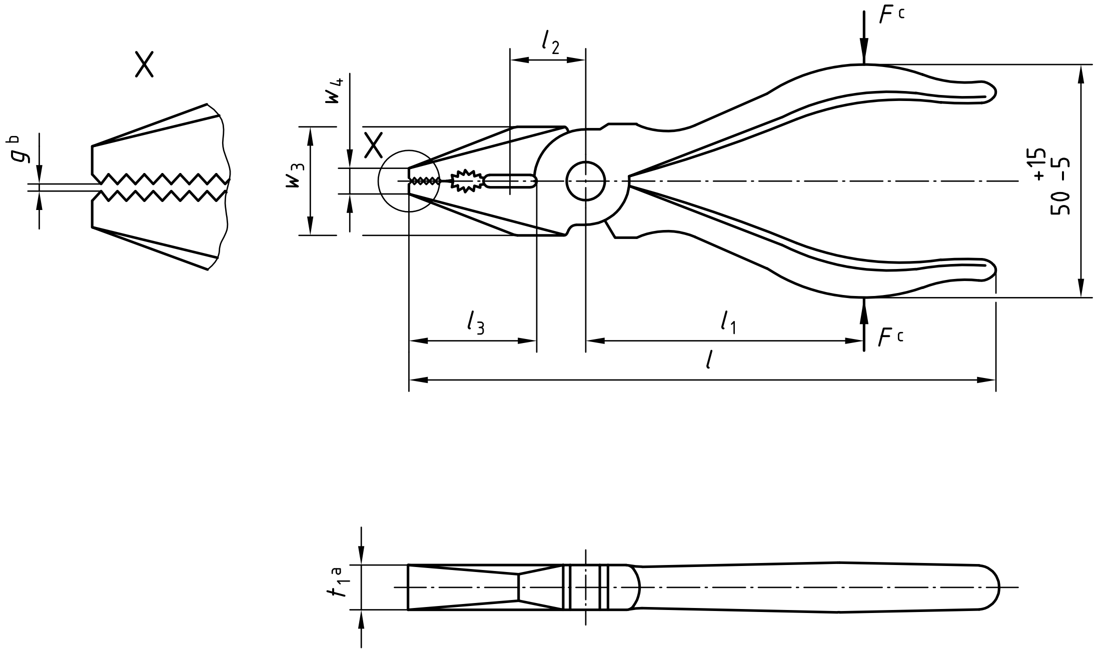
Engineer's pliers shall be tested in accordance with ISO 5744.

After the load test, the permanent set s shall not exceed the value given in Table 2. If distance l_1 is not suitable for the load test, the formula given in ISO 5744:2004, 4.2 shall be used.

The cutting force, F_1, shall not exceed the values given in Table 2 when cutting the test wire of diameter d.

Pliers having a lever ratio differing from the values given in Table 2 shall be checked for compliance using the formula given in ISO 5744:2004, 5.3.2.

Dimensions in millimetres



a The jaws may be tapered to a point over the length l_3.

b Measured with pliers closed.

c F = load applied in load test or F_1 force applied in cutting test.

Figure 1 — Engineer's pliers

Table 1 — Engineer's pliers, main dimensions

Nominal length l	l_{min} mm	l_{max} mm	l_3 mm	$w_{3\,max}$ mm	$w_{4\,max}$ mm	$t_{1\,max}$ max.	g_{max} mm
125	119	132	28 ± 3	20	5	9	0,3
140	133	149	30 ± 4	23	5,6	10	0,3
160	150	169	32 ± 5	25	6,3	11,2	0,4
180	170	189	36 ± 6	28	7,1	12,5	0,4
200	190	209	40 ± 8	32	8	14	0,5
220	210	234	45 ± 10	36	9	16	0,5
250	235	264	50 ± 12	40	10	18	0,6

