

INTERNATIONAL STANDARD

ISO 5743

Third edition
2004-09-15

Pliers and nippers — General technical requirements

Pinces et tenailles — Spécifications techniques générales



Reference number
ISO 5743:2004(E)

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Published in Switzerland

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 5743 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 10, *Assembly tools for screws and nuts, pliers and nippers*.

This third edition cancels and replaces the second edition (ISO 5743:1988) which has been technically revised.

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Pliers and nippers — General technical requirements

1 Scope

This International Standard specifies the general technical requirements to be met by pliers and nippers.

It does not specify insulating or antistatic characteristics of handle coatings. Plastic coatings or plastic sleeves are intended for gripping comfort only.

This International Standard is only applicable to pliers for which ISO standards exist.

2 Normative references

The following referenced documents are indispensable for the application 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 5742, *Pliers and nippers — Nomenclature*

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

3 Handles

Handles shall be shaped to afford a comfortable grip and shall prevent accidental pinching of the hands.

For pliers provided with a comfort grip, the width of the handles shall include the thickness of the comfort grip.

4 Heads

4.1 Joint

The joint shall be constructed to allow free movement from the closed to the open position and shall be free from excessive side movement in any position that could impair the function of the tool.

4.2 Jaws

For all pliers the jaws shall meet at the point. Pliers and nippers for which other specifications are laid down in the dimensional standards are excepted.

Cutting edge of cutting pliers shall have a minimum hardness of 55 HRC.

The hardness of the gripping surfaces for all pliers shall be a minimum of 42 HRC. The hardness shall be measured in accordance with ISO 5744.

5 Designation

5.1 Nippers

The principal information for the designation of nippers shall be given in the following order and in accordance with ISO 5742:

- a) designation and number of nomenclature;
- b) number of ISO standard concerned;
- c) dimensions;
- d) direction and position of cutting edges;
- e) type and shape of cutting edges;
- f) type of joint;
- g) shape of handles in the longitudinal direction;
- h) field of application (only if required for better understanding).

5.2 Gripping and dual-purpose pliers

The principal information for the designation of gripping and dual-purpose pliers shall be given in the following order and in accordance with ISO 5742:

- a) designation and number of nomenclature;
- b) number of ISO standard concerned;
- c) dimensions;
- d) shape of nose (end view at the point);
- e) shape of nose (in the longitudinal direction);
- f) shape of back of the nose;
- g) whether with or without serrations;
- h) whether with or without grooves;
- i) type of joint;
- j) shape of handles in the longitudinal direction;
- k) field of application; for dual-purpose pliers, specify the test wire (only if required for better understanding).

6 Marking

Pliers shall be marked with at least the name or trademark of the manufacturer or responsible supplier.

Bibliography

- [1] ISO 5745, *Pliers and nippers — Pliers for gripping and manipulating — Dimensions and test values*
- [2] ISO 5746, *Pliers and nippers — Engineer's and lineman's pliers — Dimensions and test values*
- [3] ISO 5747, *Pliers and nippers — Lever assisted side cutting pliers, end and diagonal cutting nippers — Dimensions and test values*
- [4] ISO 5748, *Pliers and nippers — End cutting nippers — Dimensions and test values*
- [5] ISO 5749, *Pliers and nippers — Diagonal cutting nippers — Dimensions and test values*
- [6] ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method (scales A, B, C, D, E, F, G, H, K, N, T)*
- [7] ISO 8976, *Pliers and nippers — Multiple slip joint pliers — Dimensions and test values*
- [8] ISO 9242, *Pliers and nippers — Construction worker's pincers — Dimensions and test values*
- [9] ISO 9243, *Pliers and nippers — Carpenter's pincers — Dimensions and test values*
- [10] ISO 9343, *Pliers and nippers — Slip joint pliers — Dimensions and test values*

