
**Machine tools — Dimensions and
geometric tests for self-centring chucks
with two-piece jaws —**

Part 1:

**Manually operated chucks with tongue
and groove type jaws**

Machines-outils — Dimensions et essais géométriques pour mandrins à serrage concentrique et à mors rapportés —

Partie 1: Mandrins à commande manuelle avec mors à assemblage cruciforme par tenon et languette



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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.

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 3442-1 was prepared by Technical Committee ISO/TC 39, *Machine tools*, Subcommittee SC 8, *Work holding spindles and chucks*.

Together with ISO 3442-2 and ISO 3442-3, this first edition of ISO 3442-1 cancels and replaces ISO 3442:1991 and ISO 9401:1991. ISO/TC 39/SC 8 decided to split ISO 3442:1991 into three parts, at the same time incorporating ISO 9401:1991. As soon as all three parts of ISO 3442 are published, ISO 3442:1991 and ISO 9401:1991 will be withdrawn.

ISO 3442 consists of the following parts, under the general title *Machine tools — Dimensions and geometric tests for self-centring chucks with two-piece jaws*:

- *Part 1: Manually operated chucks with tongue and groove type jaws*
- *Part 2: Power-operated chucks with tongue and groove type jaws*
- *Part 3: Power-operated chucks with serrated jaws*

Machine tools — Dimensions and geometric tests for self-centring chucks with two-piece jaws —

Part 1:

Manually operated chucks with tongue and groove type jaws

1 Scope

This part of ISO 3442 specifies the sizes for interchangeability of self-centring, manually operated chucks with two-piece jaws (tongue and groove type) and describes, by reference to ISO 230-1, the geometric tests for such chucks. It also specifies the tolerances which apply to these tests.

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 230-1:1996, *Test code for machine tools — Part 1: Geometric accuracy of machines operating under no-load or finishing conditions*

3 Preliminary remarks

3.1 Measurement units

All dimensions and tolerances in this part of ISO 3442 are expressed in millimetres.

3.2 Geometric tests

This part of ISO 3442 deals only with the verification of the rotational accuracy of the chuck and the positioning of the assembling elements of the top jaws. It does not apply to other dynamic considerations, such as measurement of lack of balance during rotation, balancing or measurement of gripping power.

The main purpose of these tests is to allow either top jaw mounting compatible with the machining accuracy of the chuck or precise setting for top jaws on the chuck after carrying out preliminary centring, straightening or locking operations on a jig separate from the machine.

4 Accuracy classes

This part of ISO 3442 specifies only one accuracy class.