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

**Part 3:
Power-operated chucks with serrated
jaws**

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

Partie 3: Mandrins à commande axiale assistée avec mors à assemblage par dentelure



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Contents

Page

Foreword.....	iv
1 Scope	1
2 Normative references	1
3 Preliminary remarks	1
3.1 Measuring units	1
3.2 Geometric tests	1
3.3 Tests to be performed	1
4 Precision classes.....	1
5 Sizes for interchangeability	2
5.1 90° serrations — Dimensions	2
5.2 90° serrations — Permissible cumulative pitch deviation.....	2
5.3 60° serrations — Dimensions	3
5.4 60° serrations — Permissible cumulative pitch deviation.....	3
5.5 Jaw nuts — Dimensions	4
6 Geometric tests.....	5
6.1 Test mandrels.....	5
6.2 Spindle or face plate accuracy	5
6.3 Chuck body accuracy.....	5
6.4 Test with test top jaws (hard jaws)	5
6.5 Tests with machined top jaws	6
6.6 Tests off-the-spindle.....	6
6.7 Chuck accuracy	9

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 3442-3 was prepared by Technical Committee ISO/TC 39, *Machine tools*, Subcommittee SC 8, *Work holding spindles and chucks*.

This first edition of ISO 3442-3, together with ISO 3442-1 and ISO 3442-2, cancels and replaces ISO 3442:1991 and ISO 9401:1991. ISO/TC 39/SC 8 decided to divide ISO 3442:1991 into three parts and to combine them with ISO 9401:1991. When 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 3: Power-operated chucks with serrated jaws

1 Scope

This part of ISO 3442 specifies 90° and 60° serrations and jaw nuts applicable to 90° and 60° serrations for mounting the top jaws on the base jaws of power chucks, in order to ensure interchangeability. It also describes, with reference to ISO 230-1, the geometric tests for self-centring, power-operated chucks with two or more two-piece jaws (serrated type), and the corresponding tolerances which apply.

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*

ISO 965-3, *ISO general purpose metric screw threads — Tolerances — Part 3: Deviations for constructional screw threads*

3 Preliminary remarks

3.1 Measuring 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 inspection of rotational accuracy of the chuck, the straightening and the centring of workpieces. It does not apply to other dynamic qualities, such as the measurement of lack of balance during rotation, balancing or the measurement of gripping power.

3.3 Tests to be performed

When inspecting a chuck, it is not always necessary to carry out all the tests described in this part of ISO 3442. The users of this part of ISO 3442 may choose those tests which relate to the properties that are of interest to them.

4 Accuracy classes

This part of ISO 3442 specifies only one accuracy class.