

Machine tools — Test conditions for external cylindrical centreless grinding machines — Testing of the accuracy

ICS 25.080.50

National foreword

This British Standard reproduces verbatim ISO 3875:2004 and implements it as the UK national standard. It supersedes BS 4656-24:1993 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MTE/1, Machine tools, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

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Summary of pages

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Machine tools — Test conditions for external cylindrical centreless grinding machines — Testing of the accuracy

*Conditions d'essai des machines à rectifier les surfaces extérieures
sans centres — Contrôle de la précision*



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Foreword

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ISO 3875 was prepared by Technical Committee ISO/TC 39, *Machine tools*, Subcommittee SC 2, *Test conditions for metal cutting machine tools*.

This third edition cancels and replaces the second edition (ISO 3875:1990), which has been technically revised.

Machine tools — Test conditions for external cylindrical centreless grinding machines — Testing of the accuracy

1 Scope

The International Standard specifies, with reference to ISO 230-1 and 230-2, geometric tests, machining tests and tests for accuracy and repeatability of positioning axes on general purpose and normal accuracy external cylindrical centreless grinding machines. It also specifies the applicable tolerances corresponding to the above-mentioned tests.

This International Standard deals only with the verification of accuracy of the machine. It does not apply to the testing of the machine operation (vibrations, abnormal noise, stick-slip motion of components, etc.) nor to machine characteristics (such as speeds, feeds, etc.), which should generally be checked before testing of machine accuracy.

This International Standard provides the terminology used for the principal components of the machine and the designation of the axes with reference to ISO 841.

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 230-2:1997, *Test code for machine tools — Part 2: Determination of accuracy and repeatability of positioning numerically controlled axes*

3 Terminology and design of axes

See Figure 1 and Table 1.