

Test conditions for surface grinding machines with horizontal grinding wheel spindle and reciprocating table — Testing of the accuracy —

**Part 1: Machines with a table length of
up to 1 600mm**

ICS 25.080.50

National foreword

This British Standard reproduces verbatim ISO 1986-1:2001 and implements it as the UK national standard. It supersedes BS 4656-7:1988 which is withdrawn.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

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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This British Standard, having been prepared under the direction of the Engineering Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 29 November 2001

Summary of pages

This document comprises a front cover, an inside front cover, ISO title page, pages ii to iv, pages 1 to 17 and a back cover.

The BSI copyright date displayed in this document indicates when the document was last issued.

Amendments issued since publication

Amd. No.	Date	Comments

© BSI 29 November 2001

ISBN 0 580 38724 0

**Test conditions for surface grinding
machines with horizontal grinding wheel
spindle and reciprocating table — Testing
of the accuracy —**

**Part 1:
Machines with a table length of up to
1 600 mm**

*Conditions d'essai des machines à rectifier les surfaces planes, à broche
porte-meules à axe horizontal — Contrôle de la précision —*

Partie 1: Machines avec une table jusqu'à 1 600 mm de long



Reference number
ISO 1986-1:2001(E)

Contents

Page

Foreword.....	iv
1 Scope	1
2 Normative reference	1
3 Terminology and designation of axes	1
4 Preliminary remarks	3
4.1 Measuring units	3
4.2 Reference to ISO 230-1	3
4.3 Testing sequence.....	3
4.4 Tests to be performed	3
4.5 Measuring instruments	3
4.6 Minimum tolerance	3
4.7 Machining tests.....	3
4.8 Diagrams.....	3
5 Geometric tests.....	4
5.1 Linear axes	4
5.2 Table.....	8
5.3 Wheel spindle.....	11
6 Machining tests.....	15
Bibliography	17

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 3.

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 part of ISO 1986 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 1986-1 was prepared by Technical Committee ISO/TC 39, *Machine tools*, Subcommittee SC 2, *Test conditions for metal cutting machine tools*.

This first edition of ISO 1986-1 cancels and replaces ISO 1986:1985, of which it constitutes a technical revision.

ISO 1986 consists of the following parts, under the general title *Test conditions for surface grinding machines with horizontal grinding wheel spindle and reciprocating table — Testing of the accuracy*:

- *Part 1: Machines with a table length of up to 1 600 mm*
- *Part 2: Machines with a table length longer than 1 600 mm*

Test conditions for surface grinding machines with horizontal grinding wheel spindle and reciprocating table — Testing of the accuracy —

Part 1: Machines with a table length of up to 1 600 mm

1 Scope

This part of ISO 1986 specifies, with reference to ISO 230-1, both geometric and machining tests on general purpose and normal accuracy surface grinding machines with reciprocating table up to 1 600 mm table length and horizontal grinding wheel spindle. It also specifies the applicable tolerances corresponding to the above-mentioned tests.

NOTE For machines with table length larger than 1 600 mm, ISO 1986-2 is being prepared.

It is not applicable to surface grinding machines with fixed or rotating tables or to machines having longitudinal traverse of the wheelhead.

This part of ISO 1986 deals only with the verification of the accuracy of the machine; it does not apply to the testing of the machine operation (vibrations, abnormal noises, stick-slip motion of components, etc.), nor to the machine characteristics (such as speeds, feeds, etc.), which should generally be checked before testing the accuracy.

This part of ISO 1986 provides the terminology used for the principal components of the machine and indicates the designation of the axes in accordance with reference to ISO 841.

2 Normative reference

The following normative document contain provisions which, through reference in this text, constitute provisions of this part of ISO 1986. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 1986 are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

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

3 Terminology and designation of axes

See Figure 1 and Table 1.

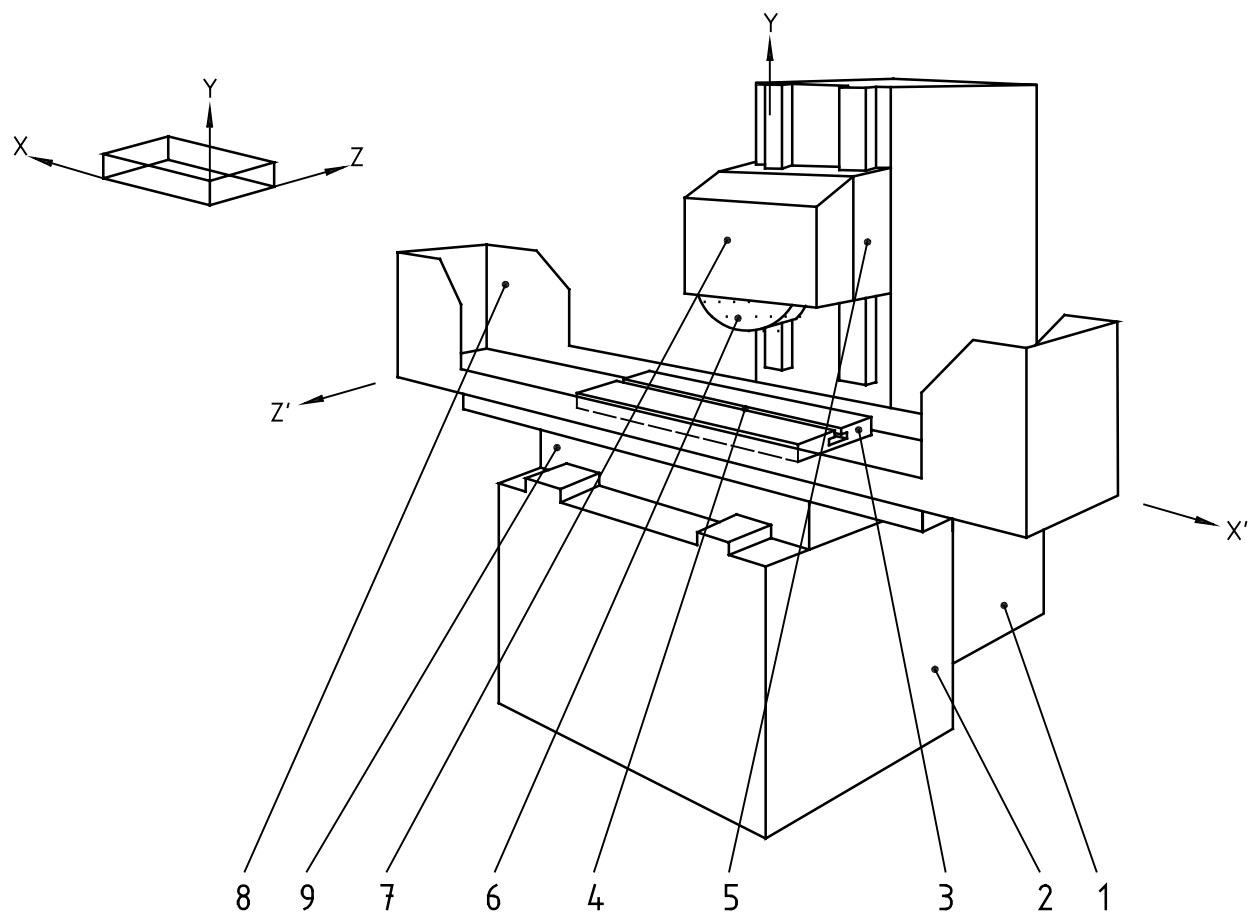


Figure 1

Table 1

Repère	English	French	German	Italian
1	Column	Montant	Ständer	Montante
2	Bed	Banc	Bett	Banco
3	Table	Table	Tisch	Tavola
4	Reference T-slot	Rainure en T de positionnement	Richtnut	Scanalatura di riferimento
5	Wheelhead	Poupée porte-meule	Schleifspindelstock	Testa porta-mola
6	Grinding wheel	Outil à rectifier	Schleifwerkzeug	Mola
7	Wheel guard	Carter de protection	Schutzhaube	Riparo mola
8	Splash guard	Protection	Fangschutz	Riparo para-spruzzi
9	Saddle	Chariot transversal	Schlitten	Sella

NOTE In addition to terms used in the two of the three official ISO languages (English and French), this table gives equivalent terms in German and Italian published under the responsibility of the member bodies for Germany (DIN) and Italy (UNI). However, only the terms given in the official languages can be considered as ISO terms.