
INTERNATIONAL STANDARD



229

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Machine tools – Speeds and feeds

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 39 has reviewed ISO Recommendation R 229 and found it suitable for transformation. International Standard ISO 229 therefore replaces ISO Recommendation R 229-1961.

ISO Recommendation R 229 was approved by the Member Bodies of the following countries :

Belgium	Germany	Romania
Burma	Hungary	South Africa, Rep. of
Czechoslovakia	Italy	Sweden
Denmark	Pakistan	Switzerland
Finland	Philippines	United Kingdom
France	Poland	U.S.S.R.

The Member Bodies of the following countries expressed disapproval of the Recommendation on technical grounds :

Netherlands
U.S.A.*

The Member Body of the following country disapproved the transformation of ISO/R 229 into an International Standard :

United Kingdom

* Subsequently, this Member Body approved the Recommendation.

Machine tools — Speeds and feeds

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the speeds (number of revolutions or strokes per minute) and the feeds (in millimetres or in inches, per minute, per revolution, or per stroke) of machine tools working by removal of metal and driven directly by an electrical motor.

It is not applicable, for obvious technical reasons, to machines with continuous speed variations, feeds for thread forming, etc.

2 GENERALITIES

2.1 The **basic values** of the speeds, as well as those of the feeds, are taken from the R 20 series of preferred numbers (see ISO 3).

2.2 The permissible limits for the **actual values** have been determined not from the basic values, but from the corresponding theoretical values of the geometric series with ratio $\sqrt[20]{10}$.

The limits of tolerance, compared with these theoretical values, are given in table 1.

TABLE 1 — Limits of tolerances

Tolerance % for speeds	Tolerance % for feeds			
	millimetres per minute	inches per minute	millimetres per revolution or per stroke	inches per revolution or per stroke
- 2	- 2	- 3	- 2	- 3
+ 6	+ 6	+ 5	+ 3	+ 2