
**Cutter arbors with parallel key and
tenon drive —**

Part 3:
**Dimensions and designation of
tool holders with 7/24 taper for
automatic tool changer**

Mandrins porte-fraise à entraînement par clavette et tenon —

*Partie 3: Dimensions et désignation des porte-outils à conicité 7/24
pour changement automatique d'outils*



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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives.

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The committee responsible for this document is ISO/TC 29, *Small tools*, Subcommittee SC 2, *High speed steel cutting tools and their attachments*.

This second edition cancels and replaces the first edition (ISO 10649-3:2010), of which it constitutes a minor revision with the following changes:

- addition of [Annex A](#), which gives the relationship between the symbols of this part of ISO 10649 and the symbols according to the ISO 13399 series.

ISO 10649 consists of the following parts, under the general title *Cutter arbors with parallel key and tenon drive*:

- *Part 1: General dimensions*
- *Part 2: Dimensions and designation of tool holders with taper interface with flange contact surface*
- *Part 3: Dimensions and designation of tool holders with 7/24 taper for automatic tool changer*
- *Part 4: Dimensions and designation of tool holders with 7/24 taper without automatic tool changer*
- *Part 5: Dimensions and designation of tool holders with polygonal taper interface with flange contact surface*
- *Part 6: Dimensions and designation of tool holders with modular taper interface with ball track system*

Introduction

The aim of ISO 10649 (all parts) is to specify the main dimensions for tool holders for this type of interface, and prevent the risk of collision when exchanging the assembled tool within the machine tools.

Cutter arbors with parallel key and tenon drive —

Part 3:

Dimensions and designation of tool holders with 7/24 taper for automatic tool changer

1 Scope

This part of ISO 10649 specifies the dimensions of cutter arbors with parallel key and tenon drive with 7/24 tapers for automatic tool changer.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

ISO 2768-2, *General tolerances — Part 2: Geometrical tolerances for features without individual tolerance indications*

ISO 2780, *Milling cutters with tenon drive — Interchangeability dimensions for cutter arbors — Metric series*

ISO 7388-1, *Tool shanks with 7/24 taper for automatic tool changers — Part 1: Dimensions and designation of shanks of forms A, AD, AF, U, UD and UF*

ISO 7388-2, *Tool shanks with 7/24 taper for automatic tool changers — Part 2: Dimensions and designation of shanks of forms J, JD and JF*

ISO 10643, *Dimensions of accessories for cutter arbors with parallel key and tenon drive*

ISO 10649-1, *Cutter arbors with parallel key and tenon drive — Part 1: General dimensions*

3 Dimensions

3.1 General

All dimensions and tolerances are given in millimetres. Tolerances not specified shall be of tolerance class “m” in accordance with ISO 2768-1 and of class “K” in accordance with ISO 2768-2.

The interchangeability dimensions of the milling cutter bearing on the cutter arbor shall be in conformity with ISO 2780. The retaining screw used shall have the dimensions specified in ISO 2780.

The dimensions of tool interface for arbors with parallel key and tenon drive shall be in accordance with ISO 10649-1.

The figures are schematic and are not intended to specify a given design; only the given dimension shall be met.