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7/24 tapers for tool shanks for manual changing

Cônes d'emmanchement d'outils à conicité 7/24 pour changement manuel

This is a preview of "ISO 297:1988". [Click here to purchase the full version from the ANSI store.](#)

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.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 297 was prepared jointly by Technical Committees ISO/TC 39, *Machine tools*, and ISO/TC 29, *Small tools*.

This second edition cancels and replaces the first edition (ISO 297 : 1982) and ISO 2583 : 1972.

7/24 tapers for tool shanks for manual changing

1 Scope

This International Standard specifies the dimensions, in millimetres¹⁾, of 7/24 tapers for spindle noses and tool shanks and equipment for manual changing. It also specifies the external diameters of the collars for these tool shanks and equipment, and the positioning of the front face of the collar with respect to the taper in the case of attachment by the front face.

NOTES

1 The collars have two seatings on the periphery into which the two driving tenons on the machine spindle are fitted and are intended for the transmission of the spindle rotational movement to the tool or equipment.

2 Shank attachment can be carried out either by conventional rear clamping, using a clamping fastener screwed on the rear side of the shank, or by front clamping of the collar using a locking device mounted on the machine spindle and applying the tool or equipment on to the spindle. Only in the latter case is it necessary for the positioning of the front face of the collar with respect to the taper gauge plane having the basic diameter D_1 to be accurately specified.

This type of taper is designed for various types of machine tool spindle noses as well as for the corresponding tool shanks and equipment.

The dimensions for tool shank tapers automatic changers are specified in ISO 7388-1.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International

Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4762 : 1977, *Hexagon socket head cap screws — Product grade A.*

ISO 7388-1 : 1983, *Tool shanks with 7/24 taper for automatic tool changers — Part 1 : Shanks Nos. 40, 45 and 50 — Dimensions.*

3 Interchangeability

This International Standard provides, as regards threads, two entirely distinct types of product according to the type of thread, M or UN.

In order to distinguish between those two types, it is important that the component itself be marked with the corresponding thread symbol, each national standards body being free to adopt either of the two threads in its national standard.

For all other dimensions, however, the products manufactured either to metric or to inch values are strictly interchangeable, though not absolutely identical. Acceptance conditions, if provided for in national standards, should therefore be such as to allow for the acceptance of products specified either in inch or in metric values.

1) The inch values will be determined after acceptance of the metric values.