

Tool shanks with 7/24 taper for automatic tool changers —

Part 1: Specification for shanks Nos. 40, 45 and 50

[ISO title: Tool shanks with 7/24 taper for automatic tool
changers — Part 1: Shanks Nos. 40, 45 and 50 — Dimensions]

UDC 621.9 – 229.2

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Machine and Hand Tool Standards Committee (MTE/-) to Technical Committee MTE/7, upon which the following bodies were represented:

- Gauge and Tool Makers' Association
- Institution of Production Engineers
- Machine Tool Industry Research Association
- Milling Cutter Association
- Twist Drill and Reamer Association
- Coopted member

This British Standard, having been prepared under the direction of the Machine and Hand Tool Standards Committee, was published under the authority of the Board of BSI and comes into effect on 29 March 1985

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National foreword

This Part of BS 6607 has been prepared under the direction of the Machine and Hand Tool Standards Committee. It is identical with ISO 7388-1:1983 *“Tool shanks with 7/24 taper for automatic tool changers — Part 1: Shanks Nos. 40, 45 and 50 — Dimensions”* published by the international Organization for Standardization (ISO).

BS 6607-2 is identical with ISO 7388-2 *“Tool shanks with 7/24 taper for automatic tool changers — Part 2: Retention knobs for shanks Nos. 40, 45 and 50 — Dimensions and mechanical characteristics”*.

Terminology and conventions. The text of the international standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is especially drawn to the following.

The comma has been used throughout as the decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Wherever the words “this part of ISO 7388” appear, referring to this standard, they should be read as “this Part of BS 6607”.

Cross-references

International standards	Corresponding British Standards
ISO 7388-2:1984	BS 6607 <i>Tool shanks with 7/24 taper for automatic tool changers</i> Part 2:1985 <i>Specification for retention knobs for shanks Nos. 40, 45 and 50</i> (Identical)

The Technical Committee has reviewed the provisions of ISO 297, to which reference is made in the text, and has decided that they are acceptable for use in conjunction with this standard. However, it is expected that the revision of BS 1660:1972 *“Machine tapers, reduction sleeves and extension sockets”* will be in agreement with ISO 297.

Additional information

Conicity tolerances. The quality of conicity tolerances will be dealt with internationally by an addendum to ISO 7388-1 which will specify that conicity tolerances for shanks Nos. 40, 45 and 50 shall be as given for AT4 quality indicated in Table 8 of ISO 1947 *“System of cone tolerances for conical workpieces from $C = 1 : 3$ to $1 : 500$ and lengths from 6 mm to 630 mm”*. These values, which are all positive and expressed in angular units (AT_α) and linear units (AT_D) are given below for the range of taper lengths concerned. The value of AT_D is calculated from the AT_α value for the range of cone length L .

Range of cone length L		Cone angle tolerance grade AT4		
Over	Up to	AT_α		AT_D
		μrad	s	μm
mm 63	mm 100	63	13	4 to 6.3
100	160	50	10	5 to 8.0