

Hardmetal insert tooling —

Part 16: Specification for designation of shank type milling cutters for indexable inserts

[ISO title: Shank type milling cutters for indexable inserts —
Designation]

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Machine, Engineers and Hand Tools Standards Committee (MTE/-) to Technical Committee MTE/18 upon which the following bodies were represented:

- Advanced Manufacturing Technology Research Institute
- British Hardmetal Association
- British Railways Board
- High Speed Steel Tool Bit Association
- Society of British Aerospace Companies Limited
- Welding Manufacturers' Association (BEAMA Ltd.)

This British Standard, having been prepared under the direction of the Machine, Engineers and Hand Tools Standards Committee, was published under the authority of the Board of BSI and comes into effect on 31 December 1986

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National foreword

This Part of BS 4193 has been prepared under the direction of the Machine, Engineers and Hand Tools Standards Committee and forms part of a series, each Part dealing with an aspect of hardmetal insert tooling. The series implements corresponding International Standards in the development of which the UK has played an active part.

This Part of BS 4193 is identical with ISO 7848 “*Shank type milling cutters for indexable inserts — Designation*” which was revised and published in 1986 by the International Organization for Standardization (ISO) and was prepared by Technical Committee ISO/TC29, *Small tools*.

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 drawn especially to the following.

Wherever the words “International Standard” appear, referring to this standard, they should be read as “Part of BS 4193”.

Cross-references

International Standards	Corresponding British Standards
ISO 1832:1985	BS 4193 <i>Hardmetal insert tooling</i> Part 1:1986 <i>Specification for designation of indexable inserts for cutting tools</i> (Identical)
ISO 3338-1:1977	BS 122 <i>Specification for milling cutters</i>
ISO 3338-2:1985	Part 3:1980 <i>Milling cutters except screwed shank cutters</i> (Technically equivalent)
ISO 6262-1:1982	BS 4193 <i>Hardmetal insert tooling</i> Part 9:1982 <i>Endmills with indexable inserts and flattened parallel shank</i> (Identical)
ISO 6262-2:1982	Part 10:1982 <i>Endmills with indexable inserts and morse taper shank</i> (Identical)
ISO 7388-1:1984	BS 6607 <i>Tool shanks with 7/24 taper for automatic tool changers</i> Part 1:1985 <i>Specification for shanks Nos. 40, 45 and 50</i> (Identical)

The Technical Committee has reviewed the provisions of ISO 296, ISO 297, ISO 5413, ISO 3002-1 and ISO 7406, to which reference is made in the text and has decided that they are acceptable for use in conjunction with this standard.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope and field of application

This International Standard establishes a code for the designation of shank type milling cutters intended for indexable inserts, with the purpose of simplifying orders and specifications for such tools.

2 References

- ISO 296, *Machine tools — Self-holding tapers for tool shanks.*
- ISO 297, *7/24, tapers for tool shanks for manual changing.*
- ISO 1832, *Indexable inserts for cutting tools — Designation.*
- ISO 3002-1, *Basic quantities in cutting and grinding — Part 1: Geometry of the active part of cutting tools — General terms, reference systems, tool and working angles, chip breakers.*
- ISO 3338-1, *Parallel shanks for milling cutters — Part 1: Dimensional characteristics of plain parallel shanks.*
- ISO 3338-2, *Parallel shanks for milling cutters — Part 2: Dimensional characteristics of flatted parallel shanks.*
- ISO 5413, *Machine tools — Positive drive of Morse tapers.*
- ISO 6262-1, *End mills with indexable inserts — Part 1: End mills with flatted parallel shank.*
- ISO 6262-2, *End mills with indexable inserts — Part 2: End mills with Morse taper shank.*
- ISO 7388-1, *Tool shanks with 7/24 taper for automatic tool changers — Part 1: Shanks Nos. 40, 45 and 50 — Dimensions.*
- ISO 7406, *Bore type milling cutters for indexable inserts — Designation.*

3 Explanation of the code

The code consists of eleven symbols, all of which shall be used in any designation. Five symbols designate the characteristics of the body, two the characteristics of the shank, and four the method of holding and characteristics of the insert and the cutting length.

In addition to the standardized designation (symbols ① to ⑪) a supplementary symbol ⑫ consisting of a maximum of two letters and/or numbers may be added by the manufacturer after the standardized designation for a better description of his products, subject to this symbol being separated from the standardized designation by a dash.

No addition to or extension of the code given in this International Standard shall be made without consultation with technical committee ISO/TC 29 and its agreement. Rather than adding symbols not provided for in this system, it is preferable to add to the designation conforming to this International Standard any necessary explanations in detailed sketches or specifications.