

BS ISO 4202:2016



BSI Standards Publication

Reduction sleeves with external 7/24 taper for tools with Morse taper shanks

National foreword

This British Standard is the UK implementation of ISO 4202:2016. It supersedes BS 1660-6:1988 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MTE/18, Tools tips and inserts for cutting applications.

A list of organizations represented on this committee can be obtained on request to its secretary.

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INTERNATIONAL
STANDARD

BS ISO 4202:2016

ISO
4202

Third edition
2016-11-01

**Reduction sleeves with external 7/24
taper for tools with Morse taper shanks**

*Douilles de réduction au cône extérieur 7/24 pour outils à queue
cône Morse*



Reference number
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Contents

| | Page |
|---|----------|
| Foreword | iv |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions | 1 |
| 4 Dimensions | 2 |
| Annex A (informative) Relationship between designations in this document and ISO 13399 (all parts) | 3 |
| Bibliography | 4 |

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 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 29, *Small tools*, Subcommittee SC 2, *Holding tools, adaptive items and interfaces*.

This third edition cancels and replaces the second edition (ISO 4202:1978), of which it constitutes a minor revision, notably with the addition of [Annex A](#), which gives the relationship between the designations of this document and the ISO 13399 series.

Reduction sleeves with external 7/24 taper for tools with Morse taper shanks

1 Scope

This document specifies the dimensions of reduction sleeves with external 7/24 taper (Nos. 30, 40, 45, 50 and 60) for tools with Morse taper shanks (Nos. 1 to 6).

All these sleeves allow driving of tools having Morse taper shanks which have a tenon at the small end of the shank; some sleeves allow driving of tools having Morse taper shanks which have an axially tapped hole in the shank:

- with the use of an incorporated screw for sleeves 30 × 1 – 40 × 1 – 40 × 2 – 45 × 1 – 45 × 2 – 45 × 3 – 50 × 2 – 50 × 3 – 50 × 4 – 60 × 3 – 60 × 4 – 60 × 5;
- with the use of a draw bar for sleeves 30 × 1 – 30 × 2 – 40 × 1 – 40 × 2 – 40 × 3 – 45 × 1 – 45 × 2 – 45 × 3 – 45 × 4 – 50 × 2 – 50 × 3 – 50 × 4 – 50 × 5 – 60 × 3 – 60 × 4 – 60 × 5 – 60 × 6.

Morse tapers conform to ISO 296 while 7/24 tapers are in accordance with ISO 297.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 296, *Machine tools — Self-holding tapers for tool shanks*

ISO 297, *7/24 tapers for tool shanks for manual changing*

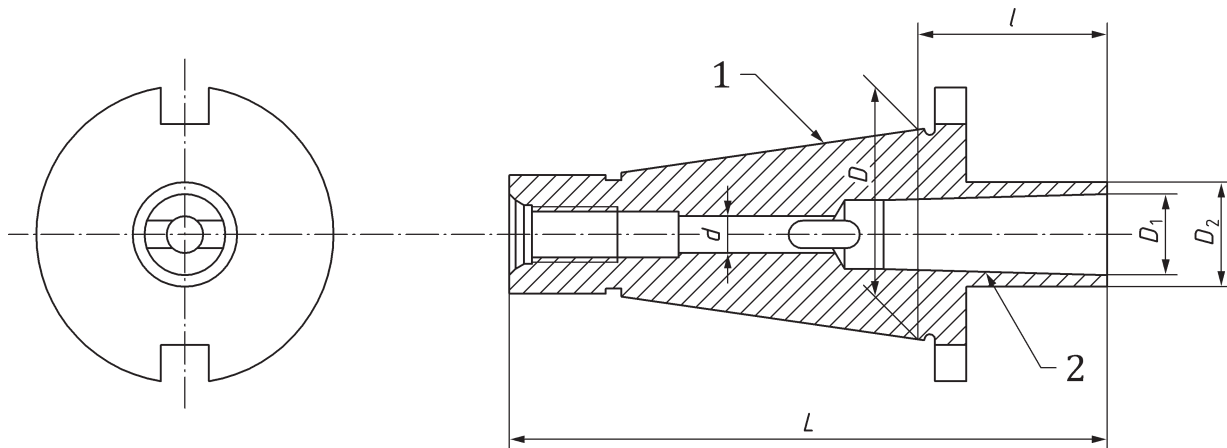
3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Dimensions



Key

- 1 7/24 external taper
- 2 internal Morse taper

NOTE The sketch is diagrammatic and is not intended to show design details.

Figure 1

Table 1

Dimensions in millimetres

| Designation | | <i>D</i> | <i>D</i> ₁ | <i>D</i> ₂ | <i>d</i> | <i>l</i> max. | <i>L</i> max. |
|---------------------|----------------------|----------|-----------------------|-----------------------|----------|------------------|------------------|
| 7/24 external taper | Internal Morse taper | | | | | | |
| 30 | 1 | 31,750 | 12,065 | 25 | 6,2 | 50 | 118 |
| | 2 | | 17,780 | 32 | 10,3 | 50 | 118 |
| | 3 | | 23,825 | 40 | 12,5 | 70 | 138 |
| 40 | 1 | 44,450 | 12,065 | 25 | 6,2 | 50 | 143 |
| | 2 | | 17,780 | 32 | 10,3 | 50 | 143 |
| | 3 | | 23,825 | 40 | 12,5 | 65 | 158 |
| | 4 | | 31,267 | 48 | 17,0 | 95 | 188 |
| 45 | 1 | 57,150 | 12,065 | 25 | 6,2 | 50 | 157 |
| | 2 | | 17,780 | 32 | 10,3 | 50 | 157 |
| | 3 | | 23,825 | 40 | 12,5 | 65 | 172 |
| | 4 | | 31,267 | 48 | 17,0 | 75 | 182 |
| | 5 | | 44,399 | 63 | 21,0 | 125 | 232 |
| 50 | 2 | 69,850 | 17,780 | 32 | 10,3 | 60 | 187 |
| | 3 | | 23,825 | 40 | 12,5 | 65 | 192 |
| | 4 | | 31,267 | 48 | 17,0 | 70 | 197 |
| | 5 | | 44,399 | 63 | 21,0 | 105 | 232 |
| 60 | 3 | 107,950 | 23,825 | 40 | 12,5 | 70 | 277 |
| | 4 | | 31,267 | 48 | 17,0 | 70 | 277 |
| | 5 | | 44,399 | 63 | 21,0 | 70 | 277 |
| | 6 | | 63,348 | 80 | 25,0 | 100 | 307 |

Annex A (informative)

Relationship between designations in this document and ISO 13399 (all parts)

For relationship between designations in this document and preferred symbols according to ISO 13399 (all parts), see [Table A.1](#).

**Table A.1 — Relationship between designations in this document
and ISO 13399 (all parts)**

| Symbol in this document | Reference in this document | Property name in ISO 13399 (all parts) | Symbol in ISO 13399 (all parts) | Reference in ISO 13399 (all parts) |
|----------------------------|---|--|---------------------------------------|--|
| 7/24 external taper | Figure 1 Table 1 | connection size code machine side | CZCMS | 71EBDBF5060E6 |
| Internal Morse taper | Figure 1 Table 1 | connection size code workpiece side | CZCWS | 727C2BCBC1684 |
| <i>l</i> | Figure 1 | protruding length | LPR | 71DCD394BB20E |
| <i>L</i> | Figure 1 | overall length | OAL | 71D078EB7C086 |
| <i>l</i> max. | Table 1 | protruding length | LPR | 71DCD394BB20E |
| <i>L</i> max. | Table 1 | overall length | OAL | 71D078EB7C086 |

Bibliography

- [1] ISO 2583,¹⁾ *Tool shanks and equipment with 7/24 tapers — Collar dimensions*
- [2] ISO 13399 (all parts), *Cutting tool data representation and exchange*

1) Withdrawn.

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BSI Group Headquarters

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