
**Reduction sleeves with 7/24 external and
Morse internal taper and incorporated
screw**

*Douilles de réduction aux cônes extérieur 7/24 et intérieur Morse, avec
vis incorporée*



Reference number
ISO 5415:2007(E)

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Foreword

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Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 5415 was prepared by Technical Committee 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 5415:1977), which has been technically revised.

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Reduction sleeves with 7/24 external and Morse internal taper and incorporated screw

1 Scope

This International Standard specifies the dimensions of reduction sleeves with 7/24 external taper No. 30-40-45-50 and 60 and Morse internal taper No. 1 to 6 (Morse taper No. 4, 5 and 6 being either with positive drive, see Figure 2, or without positive drive, see Figure 1).

These sleeves permit driving of tools with Morse taper shanks with tapped holes with the aid of an internal screw. The form of this screw and its fixation in the sleeve are left to the manufacturer's discretion.

7/24 tapers are in accordance with ISO 297. Morse tapers are in accordance with ISO 296 and ISO 5413.

2 Normative references

The following referenced documents are indispensable for the application 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*

ISO 2768-1:1989, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

ISO 5413, *Machine tools — Positive drive of Morse tapers*

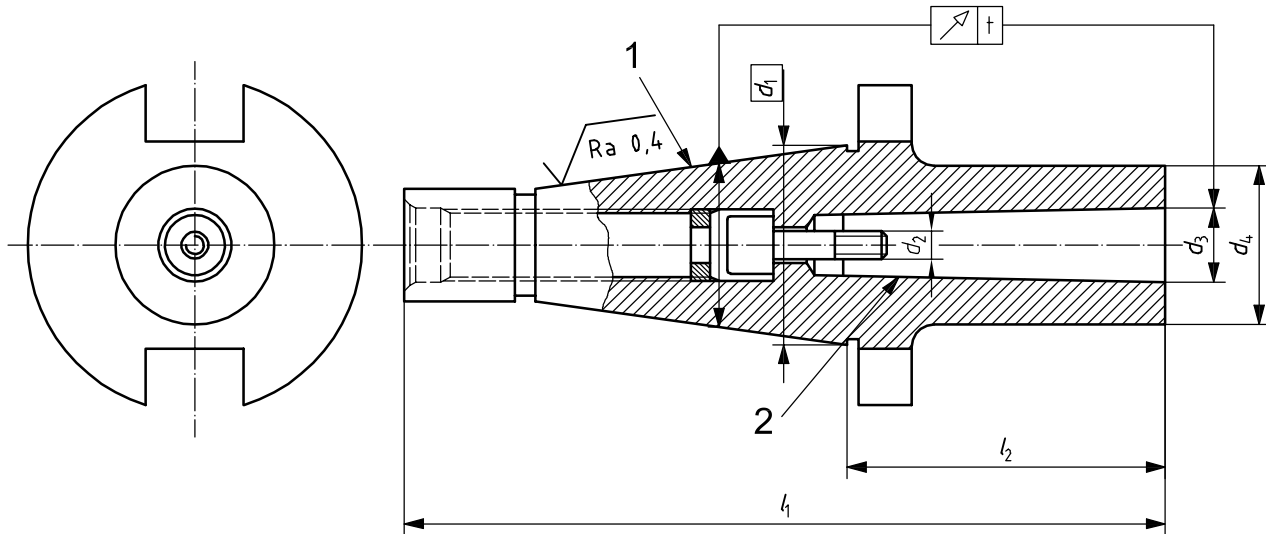
3 Dimensions

3.1 General

All dimensions and tolerances are given in millimetres. Tolerances not specified shall be of tolerance class “m” in accordance with ISO 2768-1:1989.

3.2 Reduction sleeves with 7/24 external taper shank type A and Morse internal taper No. 1 to 6

The dimensions of reduction sleeves with 7/24 external and Morse internal taper of type A are shown in Figure 1 and given in Table 1.



Key

- 1 7/24 taper
- 2 Morse taper

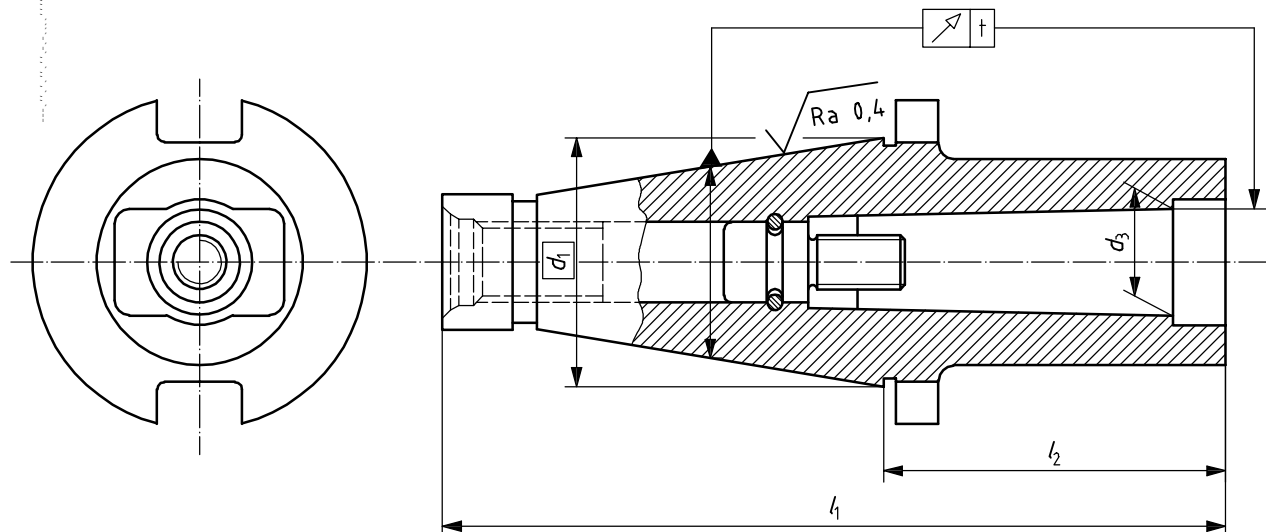
NOTE 1 The form and fixing of the screw are only given as an example.

NOTE 2 The sketch is diagrammatic and is not intended to show design details.

Figure 1 — Reduction sleeves with 7/24 external shank type A and Morse internal taper

3.3 Reduction sleeves with 7/24 external taper shank type B and Morse internal taper No. 4 to 6

The dimensions of reduction sleeves with 7/24 external and Morse internal taper of type B are shown in Figure 2 and given in Table 1.



NOTE 1 The form and fixing of the screw are only given as an example.

NOTE 2 The sketch is diagrammatic and is not intended to show design details.

Figure 2 — Reduction sleeves with 7/24 external shank type B and Morse internal taper

3.4 Dimensions of reduction sleeves with 7/24 external shank type A and B and Morse internal taper

Table 1 — Dimensions of reduction sleeves with 7/24 external shank type A and B and Morse internal taper

Designation		d_1	d_2	d_3	d_4		l_1		l_2	t
7/24 taper No.	Morse taper No.				Type A	Type B	Type A	Type B		
30	1	31,75	M6	12,065	25	—	118	—	50	0,012
	2		M10	17,780	32	—				
40	1	44,45	M6	12,065	25	—	143	—	50	0,016
	2		M10	17,780	32	—	143	—	50	
	3		M12	23,825	40	—	158	—	65	
	4		M16	31,267	48	63	188	203	95	
45	2	57,15	M10	17,780	32	—	157	—	50	0,016
	3		M12	23,825	40	—	157	—	50	
	4		M16	31,267	48	63	182	197	75	
50	2	69,85	M10	17,780	32	—	187	—	60	0,020
	3		M12	23,825	40	—	192	—	65	
	4		M16	31,267	48	63	192	207	65	
	5		M20	44,399	63	78	247	265	120	
60	5	107,95	M20	44,399	63	78	292	310	85	0,020
	6		M24	63,348	80	124	327	352	120	

4 Material

The material is left to the manufacturer's discretion but the tensile strength shall be at least 800 N/mm².

Hardness shall be 56 + 4HRC.

5 Designation

A reduction sleeve in conformance with this International Standard shall be designated as follows:

- Reduction sleeve;
- the reference to this International Standard, i.e., ISO 5415:2007;
- 7/24 external taper shank type A or B;
- 7/24 taper number;
- the letter x;
- Morse taper number.

EXAMPLE 1 A reduction sleeve with 7/24 external taper shank type A, No. 40 and Morse taper No. 4 is designated as follows:

Reduction sleeve ISO 5415 – A 40 x 4

EXAMPLE 2 A reduction sleeve with 7/24 external taper shank type B, No. 40 and Morse taper No. 4 is designated as follows:

Reduction sleeve ISO 5415 – B 40 x 4

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