TC 29

INTERNATIONAL STANDARD ISO 3937

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Cutter arbors with tenon drive — Dimensions

Mandrins porte-fraise à entraînement par tenons — Dimensions

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

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.

International Standard ISO 3937-1977, the second edition of this International Standard, has been drawn up by Technical Committee ISO/TC 29, *Small tools*, and contains the modifications which were circulated, in the form of an addendum, to the member bodies in September 1976.

This addendum has been approved by the member bodies of the following countries :

Australia	Germany	Romania
Austria	Hungary	South Africa, Rep. of
Belgium	India	Spain
Brazil	Israel	Sweden
Bulgaria	Italy	Turkey
Chile	Korea, Rep. of	United Kingdom
Egypt, Arab Rep. of	Mexico	U.S.S.R.
France	Netherlands	Yugoslavia

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Poland
Switzerland

This second edition cancels and replaces the first edition (i.e. ISO 3937-1976), which had been approved by the member bodies of the following countries :

Australia	India	South Africa, Rep. of
Austria	Israel	Spain
Belgium	Italy	Sweden
Bulgaria	Japan	Turkey
France	Korea, Dem. P. Rep. of	United Kingdom
Germany	Mexico	U.S.S.R.
Hungary	Romania	Yugoslavia

The member bodies of the following countries had expressed disapproval of the document on technical grounds :

Poland
Switzerland

Printed in Switzerland

Cutter arbors with tenon drive — Dimensions

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the dimensions of cutter arbors with tenon drive and with Morse or 7/24 tapers.

The interchangeability dimensions of the milling cutter bearing on the cutter arbor are in conformity with ISO 2780. The retaining bolt which is used shall have the dimensions specified in ISO 2780.

Morse tapers shall conform to ISO 296 and ISO 5413; 7/24 tapers shall conform to ISO 297 and ISO 2583.

2 REFERENCES

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

ISO 297, *7/24 tapers for tool shanks.*[1)]

ISO 240, *Milling cutters — Interchangeability dimensions for cutter arbors or cutter mandrels — Metric series and inch series.*

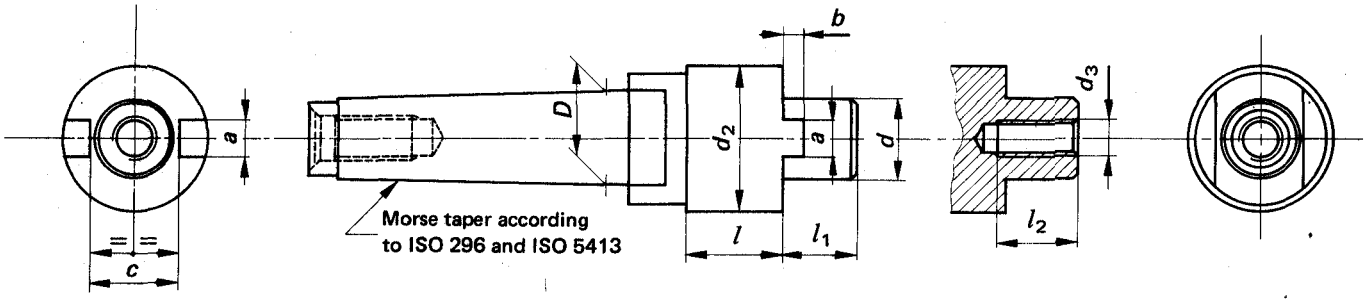
ISO 2583, *Tool shanks and equipment with 7/24 tapers — Collar dimensions.*

ISO 2780, *Milling cutters with tenon drive — Interchangeability dimensions with cutter arbors — Metric series.*

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

1) At present at the stage of draft. (Revision of ISO/R 297 and its addenda 1, 2 and 3.)

3 ARBORS WITH MORSE TAPER SHANKS



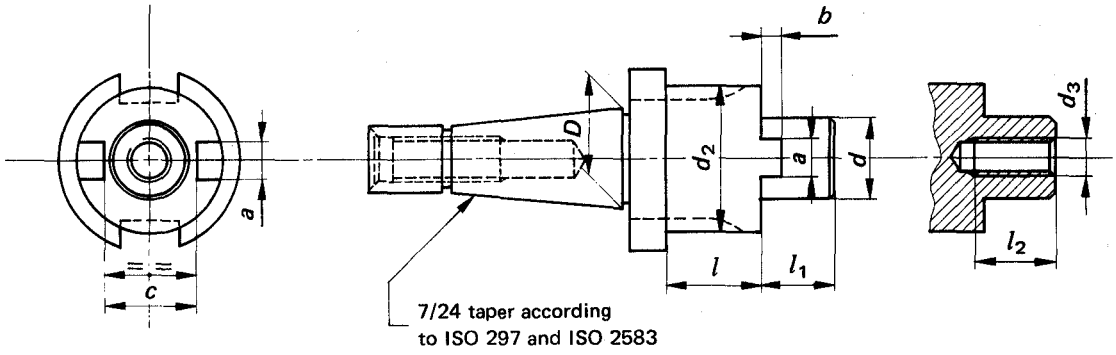
NOTE – The diagram is schematic and is not intended to specify a given design.

TABLE 1 – **Arbors with Morse taper shanks**

Dimensions in millimetres

Morse taper No.	D	d h6	l_1 max.	d_2 min.	l	a h11	b h11	c min.	l_2	d_3
3	23,825	16	17	32	25	8	5,0	17,0	22	M 8
		22	19	40	25	10	5,6	22,5	28	M10
		27	21	48	25	12	6,3	28,5	32	M12
4	31,267	22	19	40	25	10	5,6	22,5	28	M10
		27	21	48	25	12	6,3	28,5	32	M12
		32	24	58	40	14	7,0	33,5	36	M16
		40	27	70	40	16	8,0	44,5	45	M20
5	44,399	27	21	48	40	12	6,3	28,5	32	M12
		32	24	58	40	14	7,0	33,5	36	M16
		40	27	70	40	16	8,0	44,5	45	M20
		50	30	90	40	18	9,0	55,0	50	M24

4 ARBORS WITH 7/24 TAPER SHANKS



NOTE – The diagram is schematic and is not intended to specify a given design.

TABLE 2 – **Arbors with 7/24 taper shanks**

Dimensions in millimetres

7/24 taper No.	D	d h6	l_1 max.	d_2 min.	l	a h11	b h11	c min.	l_2	d_3
30	31,750	16	17	32	25	8	5,0	17,0	22	M 8
		22	19	40	25	10	5,6	22,5	28	M10
		27	21	48	25	12	6,3	28,5	32	M12
40	44,450	16	17	32	25	8	5,0	17,0	22	M 8
		22	19	40	25	10	5,6	22,5	28	M10
		27	21	48	25	12	6,3	28,5	32	M12
		32	24	58	40	14	7,0	33,5	36	M16
		40	27	70	40	16	8,0	44,5	45	M20
45	57,150	22	19	40	40	10	5,6	22,5	28	M10
		27	21	48	40	12	6,3	28,5	32	M12
		32	24	58	40	14	7,0	33,5	36	M16
		40	27	70	40	16	8,0	44,5	45	M20
50	69,850	27	21	48	40	12	6,3	28,5	32	M12
		32	24	58	40	14	7,0	33,5	36	M16
		40	27	70	40	16	8,0	44,5	45	M20
		50	30	90	40	18	9,0	55,0	50	M24