International Standard ISO 3937

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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 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.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 3937 was prepared by Technical Committee ISO/TC 29, *Small tools*.

ISO 3937 was first published in 1976. This third edition cancels and replaces the second edition, of which the tolerances for l_1 and d_2 in tables 1 and 2 have been technically revised.

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

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

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

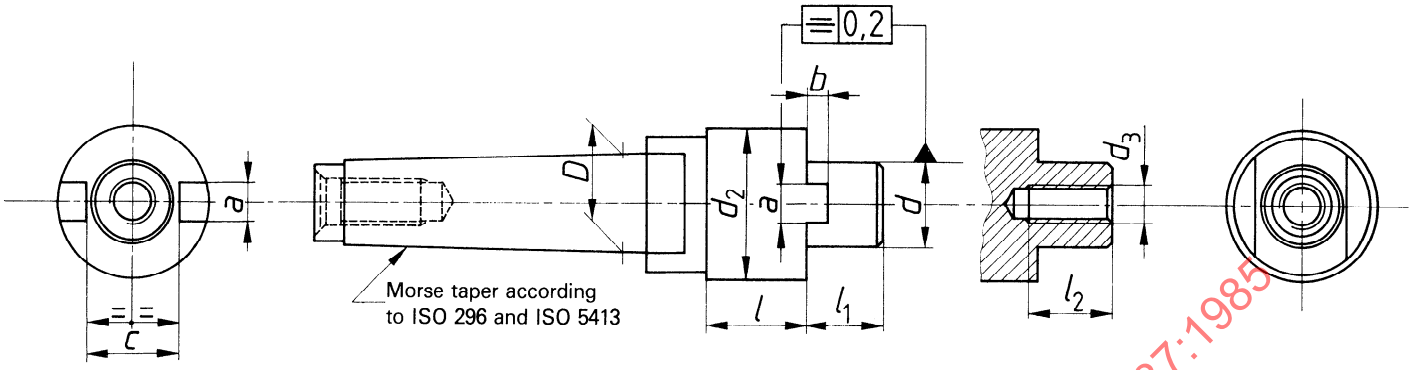
ISO 2583, *Tool shanks and equipment with* 7/24 *tapers — Collar dimensions.*

ISO 2780, *Milling cutters with tenon drive — Interchangeability dimensions with cutter arbors — Metric series.* [1)]

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

1) At present at the stage of draft. (Revision of ISO 2780-1973.)

3 Arbors with Morse taper shanks



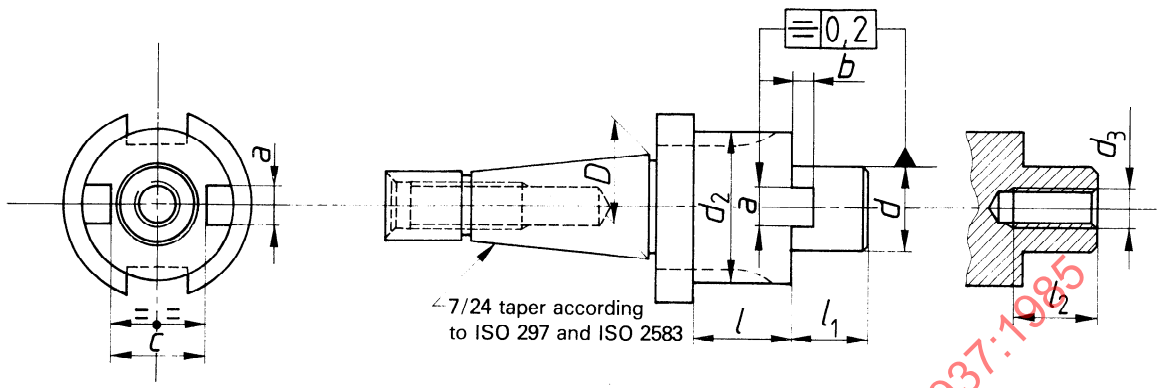
NOTE — This diagram is schematic and is not intended to specify a given design.

Table 1 — Arbors with Morse taper shanks

Dimensions and tolerances in millimetres

Morse taper No.	D	d h6	$l_1{}_{-1}^{0}$	d_2 min.	l	a h11	b h11	c min.	l_2 min.	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 — This diagram is schematic and is not intended to specify a given design.

Table 2 — Arbors with 7/24 taper shanks

Dimensions and tolerances in millimetres

7/24 taper No.	D	d h6	$l_1{}_{-1}^{0}$	d_2 min.	l	a h11	b h11	c min.	l_2 min.	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