International Standard 7388/1

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Tool shanks with 7/24 taper for automatic tool changers — Part 1 : Shanks Nos. 40, 45 and 50 — Dimensions

Queues d'outils à conicité 7/24 pour changement automatique d'outils — Partie 1 : Cônes nos 40, 45 et 50 — Dimensions

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Foreword

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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 7388/1 was developed by Technical Committee ISO/TC 39, *Machine tools*, and was circulated to the member bodies in February 1982.

It has been approved by the member bodies of the following countries :

Belgium	India	Spain
China	Italy	Sweden
Egypt, Arab Rep. of	Korea, Dem. P. Rep. of	Switzerland
France	Korea, Rep. of	United Kingdom
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Czechoslovakia
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Tool shanks with 7/24 taper for automatic tool changers — Part 1 : Shanks Nos. 40, 45 and 50 — Dimensions

0 Introduction

Users of this part of ISO 7388 are advised that proprietary rights apply to tool shanks with a taper rate of 7/24 for automatic tool changers. Patent holders have agreed to negotiate licenses on terms and conditions defined in statements that are available upon request from the ISO Central Secretariat.

1 Scope and field of application

This part of ISO 7388 lays down the dimensions of shanks Nos. 40, 45 and 50 for tools to be used on machines using an automatic gripping system for feeding tools from the magazine to the spindle and vice-versa. These tools are intended for use in spindle noses according to ISO 297 and to be used with the two tenons specified in this part of ISO 7388, provided one of these devices is adapted to dimension l_1.

2 References

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

ISO 7388/2, *Tool shanks with 7/24 for automatic tool changers — Part 2 : Retention knobs for shanks Nos. 40, 45 and 50 — Dimensions and mechanical characteristics.*

3 Dimensions

See the figure and the table.

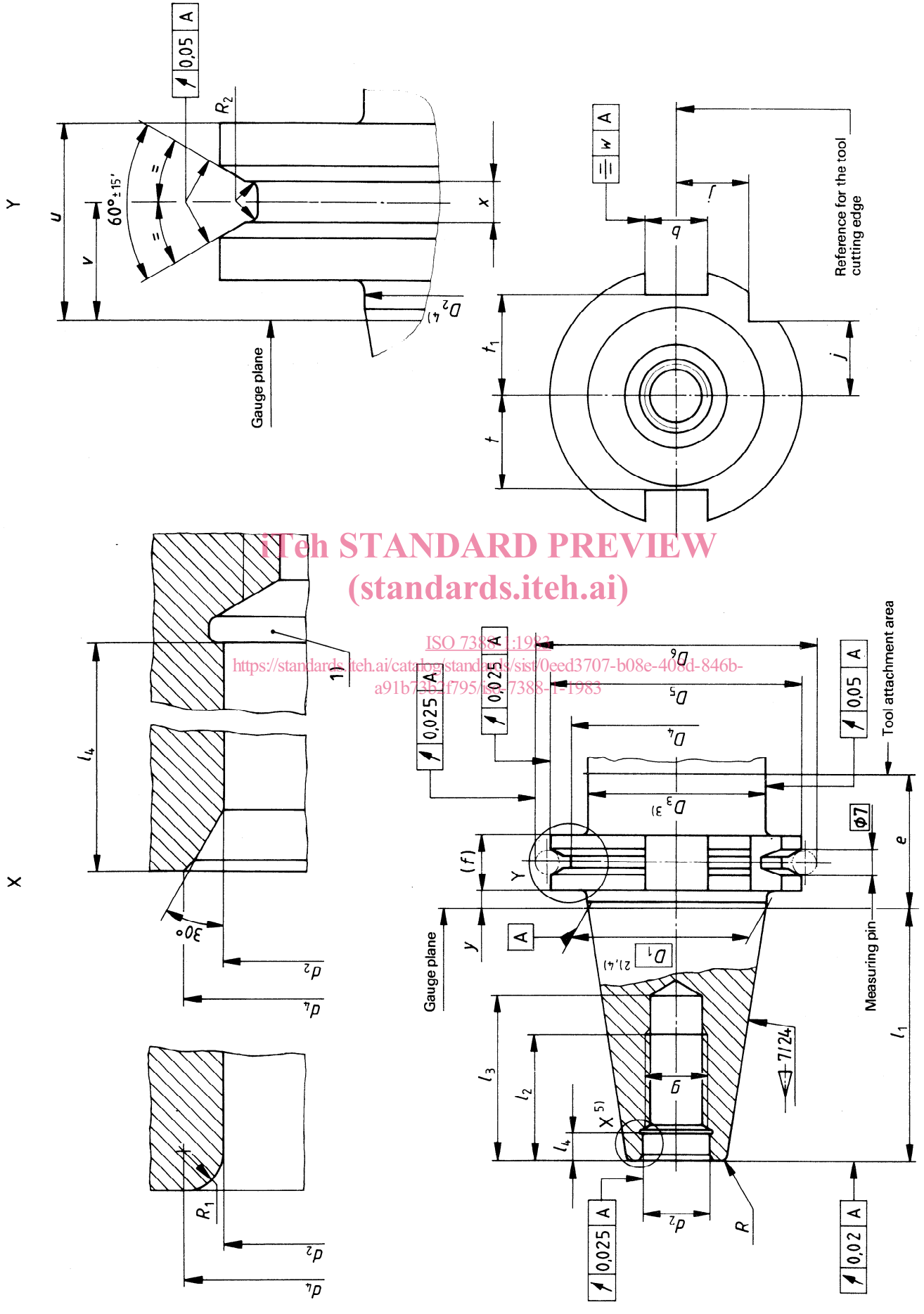

Table — Designation and dimensions

Dimensions in millimetres

Designation No.	b H12	D_1[2),4)]	D_3[3)] $^{0}_{-0,5}$	D_4 $^{0}_{-0,5}$	D_5 $^{0}_{-0,1}$	D_6 ± 0,05	d_2 H7	d_4 max.	e min.	f	g	j $^{0}_{-0,3}$	l_1 $^{0}_{-0,3}$	l_2 min.	l_3 min.	l_4 $^{+0,5}_{0}$	R $^{0}_{-0,5}$	R_1 $^{0}_{-0,5}$	R_2 $^{0}_{-0,5}$	t $^{0}_{-0,4}$	t_1 $^{0}_{-0,4}$	u $^{0}_{-0,1}$	v ± 0,1	w	x $^{+0,15}_{0}$	y ± 0,1
40	16,10	44,45	44,70	56,25	63,55	72,30	17	19,00	35	15,90	M16	18,50	68,40	32	42,50	8,20	1,20	1,00	1	22,80	25,00	19,10	11,10	0,12	3,75	3,20
45	19,30	57,15	57,40	75,25	82,55	91,35	21	23,40	35	15,90	M20	24,00	82,70	40	52,50	10,00	2,00	1,20	1	29,10	31,30	19,10	11,10	0,12	3,75	3,20
50	25,70	69,85	70,10	91,25	97,50	107,25	25	28,00	35	15,90	M24	30,00	101,75	47	61,50	11,50	2,50	1,50	1	35,50	37,70	19,10	11,10	0,20	3,75	3,20

1) Clearance groove for grinding at the option of the manufacturer.

2) D_1 : Basic diameter enclosed in the gauge plane.

3) For individual requirements, adopt following values of D_3 as indicated in the adjacent table :

N°	40	45	50
$D_{3\,max}$	50	63	80

4) Cylindrical connection at diameter D_2 : $D_1 < D_2 < D_1 + 0,05$

5) Two types of counterbore entrance are possible, and limited by diameter d_4 :

— rounded corner with a radius R_1;

— chamfer 30°.

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