

International Standard



5414/2

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

Tool chucks (end mill holders) with clamp screws for flatted parallel shank tools — Part 2 : Connecting dimensions of chucks

Mandrins porte-outils, à vis de blocage, pour outils à queue cylindrique à méplat — Partie 2 : Dimensions d'encombrement des mandrins

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Descriptors : tools, chucks, tool holders, shanks, parallel shanks, dimensions, connecting dimensions.

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 5414/2 was developed by Technical Committee ISO/TC 29, *Small tools*, and was circulated to the member bodies in November 1980.

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

Australia	India	Romania
Austria	Israel	South Africa, Rep. of
Belgium	Italy	Spain
China	Japan	Sweden
Czechoslovakia	Korea, Rep. of	Switzerland
France	Mexico	United Kingdom
Germany, F. R.	Netherlands	USSR
Hungary	Poland	

No member body expressed disapproval of the document.

Tools chucks (end mill holders) with clamp screws for flatted parallel shank tools — Part 2 : Connecting dimensions of chucks

1 Scope and field of application

This part of ISO 5414 defines the dimensions of tool chucks (end mill holders) with clamp screws as concerns connection part of these chucks.

Two types of connection are defined :

- chucks with 7/24 taper shanks for tool shanks with either single flat or a double flat;
- chucks with Morse taper shanks for tool shanks with a single flat only.

The dimensions of the driving system of the tool shanks are dealt with in ISO 5414/1.

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

Flatted parallel shanks installed in these chucks shall conform to ISO 3338/2.

2 References

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

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

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

ISO 3338/2, *Parallel shanks for milling cutters — Part 2 : Dimensional characteristics of flatted parallel shanks.*

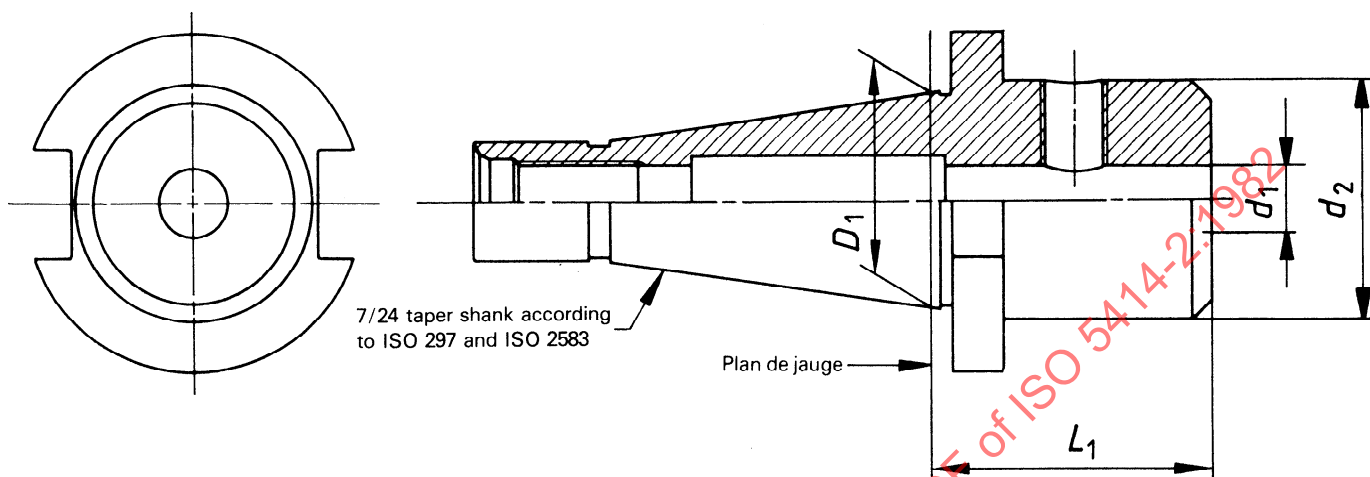
ISO 5413, *Machine tools — Positive drive of Morse tapers.*

ISO 5414/1, *Tool chucks (end mill holders) with clamp screws for flatted parallel shank tools — Part 1 : Dimensions of the driving system of the tool shanks.*

1) At present at the stage of draft. (Revision of ISO/R 297-1963 and addenda 1, 2 and 3.)

3 Chucks with 7/24 taper shanks

3.1 Chucks for tool shanks with single flat

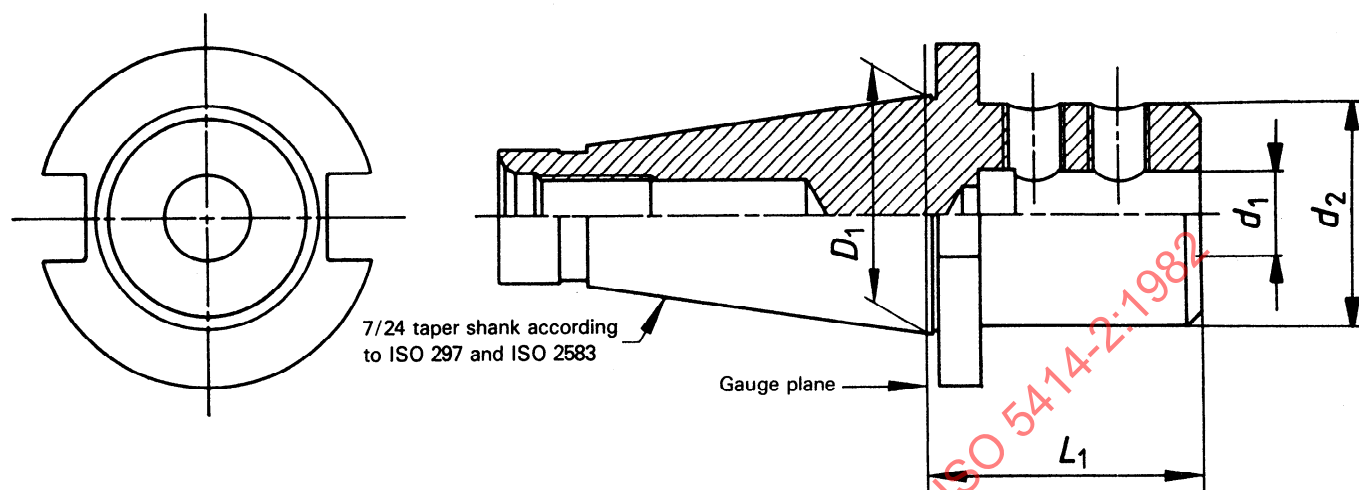


Dimensions in millimetres

7/24 taper shank No.	D_1	d_1 H5	d_2 0 - 1	$L_1^{1)}$
30	31,750	6	25	40
		8	28	
		10	35	
		12	42	
		16	48	50
		20	52	63
40	44,450	6	25	50
		8	28	
		10	35	
		12	42	
		16	48	63
		20	52	
45	57,150	6	25	50
		8	28	
		10	35	
		12	42	
		16	48	63
		20	52	
50	69,850	6	25	63
		8	28	
		10	35	
		12	42	
		16	48	
		20	52	

1) For some special devices for tool holders, other lengths, L_1 , can be determined.

3.2 Chucks for tool shanks with double flat



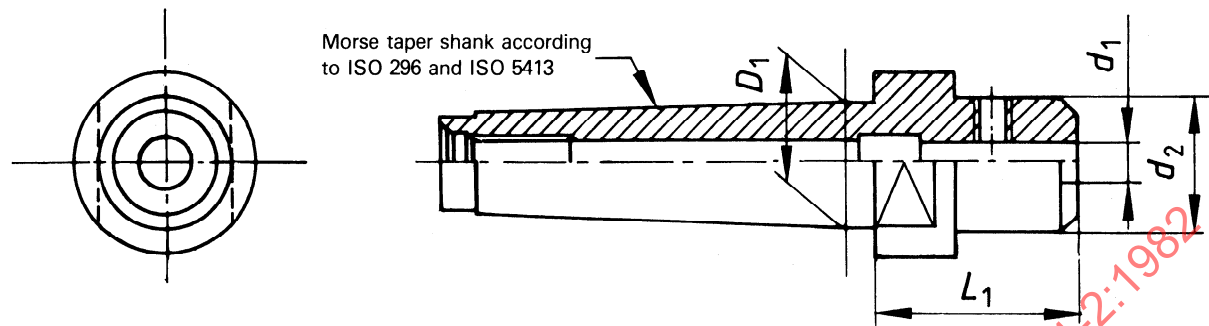
NOTE — The drilling in the 7/24 taper shank may pass through the chuck.

Dimensions in millimetres

7/24 taper shank No.	D_1	d_1 H5	d_2		$L_1^{1)}$
40	44,450	25	65	0	80
		32	72	– 1	80
45	57,150	25	65	0	80
		32	72	– 1	80
		40	90	max.	90
		50	100		100
50	69,850	25	65	0	80
		32	72	– 1	80
		40	90		90
		50	100	max.	100
		63	130		115

1) For some special devices for tool holders, other lengths, L_1 , can be determined.

4 Chucks with Morse taper shanks for tool shanks with single flat



NOTE — With the exception of chuck with Morse taper shank No. 2, these chucks have Morse taper shanks with positive drive.

Dimensions in millimetres

Morse taper No.	D_1	d_1 H5	d_2 0 1	$L_1^{1)}$
2	17,780	10	35	50
3	23,825	10	35	45
		12	42	50
		16	48	71
4	31,267	10	35	50
		12	42	56
		16	48	56
		20	52	71
5	44,399	10	35	56
		12	42	63
		16	48	63
		20	52	63

1). For some special devices for tool holders, other lengths, L_1 , can be determined.