
INTERNATIONAL STANDARD



299

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

Machine tool tables — T-slots and corresponding bolts

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[ISO 299:1973](https://standards.iteh.ai/catalog/standards/sist/23964086-4a08-4543-8d83-62146b7c55ff/iso-299-1973)

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Ref. No. ISO 299-1973 (E)

Descriptors : machine tools, T-slots, fasteners, bolts, dimensions.

Price based on 3 pages

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.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 39 has reviewed ISO Recommendation R 299 and found it suitable for transformation. International Standard ISO 299 therefore replaces ISO Recommendation R 299-1971 – 2nd edition.

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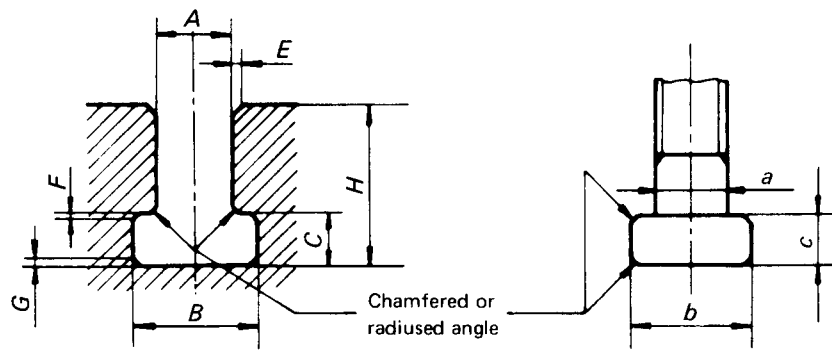
ISO Recommendation R 299 was approved by the Member Bodies of the following countries :

Belgium	Israel	Spain
Czechoslovakia	Italy	Sweden
Egypt, Arab Rep. of	Japan	Switzerland
France	Korea, Dem.P.Rep. of	Thailand
Germany	Netherlands	Turkey
Greece	Philippines	United Kingdom
Hungary	Poland	U.S.S.R.
Ireland	South Africa, Rep. of	

No Member Body expressed disapproval of the Recommendation.

The Member Body of the following country disapproved the transformation of ISO/R 299 into an International Standard :

United Kingdom



E, F and G : 45°-chamfer height or radius

TABLE 1

Dimensions in millimetres

Slot										Bolt		
A	B		C		H		E	F	G	a	b	c
	min.	max.	min.	max.	min.	max.						
5	10	11	3	3,5	8	10	1	0,6	1	4	9	2,5
6	11	12,5	5	6	11	13	1	0,6	1	5	10	4
8	14,5	16	7	8	15	18	1	0,6	1	6	13	6
10	16	18	7	8	17	21	1	0,6	1	8	15	6
12	19	21	8	9	20	25	1	0,6	1	10	18	7
14	23	25	9	11	23	28	1,6	0,6	1,6	12	22	8
18	30	32	12	14	30	36	1,6	1	1,6	16	28	10
22	37	40	16	18	38	45	1,6	1	2,5	20	34	14
28	46	50	20	22	48	56	1,6	1	2,5	24	43	18
36	56	60	25	28	61	71	2,5	1	2,5	30	53	23
42	68	72	32	35	74	85	2,5	1,6	4	36	64	28
48	80	85	36	40	84	95	2,5	2	6	42	75	32
54	90	95	40	44	94	106	2,5	2	6	48	85	36

Dimensions in inches

Slot										Bolt		
A	B		C		H		E	F	G	a	b	c
	min.	max.	min.	max.	min.	max.						
11/32	41/64	23/32	1/4	19/64	13/16	21/32	3/64	1/32	3/64	5/16	19/32	15/64
7/16	3/4	53/64	19/64	11/32	1	13/16	3/64	1/32	3/64	3/8	11/16	9/32
9/16	29/32	63/64	23/64	7/16	1 1/8	15/16	1/16	1/32	1/16	1/2	7/8	5/16
11/16	1 3/16	1 17/64	29/64	17/32	1 7/16	1 3/16	1/16	3/64	1/16	5/8	1 1/8	13/32
13/16	1 7/16	1 9/16	19/32	43/64	1 3/4	1 1/2	1/16	3/64	1/16	3/4	1 5/16	17/32
1 1/16	1 13/16	1 31/32	25/32	55/64	2 3/16	1 7/8	1/16	3/64	7/64	1	1 11/16	11/16
1 5/16	2 3/16	2 11/32	1	1 1/8	2 13/16	2 7/16	7/64	3/64	7/64	1 1/4	2 1/16	15/16
1 9/16	2 11/16	2 27/32	1 1/4	1 3/8	3 3/8	2 15/16	7/64	1/16	5/32	1 1/2	2 1/2	1 3/16

Slots : Tolerances on A : H12 for fixing slots,
H8 for tenon slots.

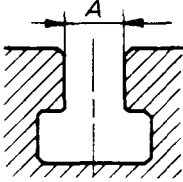
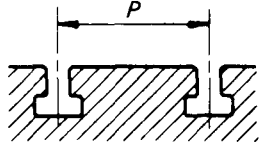
Bolts : Tolerances on a, b, c : usual tolerances for bolts and nuts.

NOTE – Though the assembly by bolts is the only one shown, any other device complying with the same interchangeability conditions may be regarded as in agreement with this International Standard.

3 SPACING OF SLOTS

For each dimension A of standardized T-slots, three values of pitch, P , are given in table 2, from which the manufacturer is advised, unless there is a justifiable reason to do otherwise, to choose the one best fitted to the dimensions of a given table or plate and to the number of slots required for its use, additionally taking into account the advantage of providing, whenever possible, symmetrically arranged slots about a median slot. When there is an even number of slots, the reference slot shall be clearly indicated on the machine table itself.

TABLE 2

			
Slot width A		Pitch P	
mm	in	mm	in
5	—	20 — 25 — 32	—
6	—	25 — 32 — 40	—
8	—	32 — 40 — 50	—
10	11/32	40 — 50 — 63	1 1/2 — 2 — 2 1/2
12	7/16	50 — 63 — 80	2 — 2 1/2 — 3
14	9/16	63 — 80 — 100	2 1/2 — 3 — 4
18	1 1/16	80 — 100 — 125	3 — 4 — 5
22	13/16	100 — 125 — 160	4 — 5 — 6 1/2
28	1 1/16	125 — 160 — 200	5 — 6 1/2 — 8
36	1 5/16	160 — 200 — 250	6 1/2 — 8 — 10
42	1 9/16	200 — 250 — 320	8 — 10 — 13
48	—	250 — 320 — 400	—
54	—	320 — 400 — 500	—

Where values of P greater or less than those given in table 2 are absolutely necessary, they shall be chosen from the values of the R 10 series of preferred numbers; where intermediate values are required, they shall be chosen from the values of the R 20 series.