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# INTERNATIONAL STANDARD



# 3145

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

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## Rolling bearings — Bearings with spherical outside surface and extended inner ring width — Eccentric locking collars

*Roulements — Roulements à surface extérieure sphérique et à bague intérieure large — Bague de blocage excentrique*

First edition — 1974-06-01

**ITeCh STANDARD PREVIEW**

**(standards.iteh.ai)**

*Replaced by ISO 9628:1992*

ISO 3145:1974

<https://standards.iteh.ai/catalog/standards/sist/cdcfdc40-d2b1-499f-9aaa-614a99c7e643/iso-3145-1974>

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Descriptors : rolling bearings, ball bearings, dimensions, dimensional tolerances.

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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 3145 was drawn up by Technical Committee ISO/TC 4, *Rolling bearings*, and circulated to the Member Bodies in February 1973.

It has been approved by the Member Bodies of the following countries :

Australia	India	Sweden
Austria	Italy	Switzerland
Belgium	Japan	Thailand
Bulgaria	Mexico	Turkey
Canada	Netherlands	United Kingdom
France	Poland	U.S.A.
Germany	Romania	
Hungary	Spain	

This International Standard has also been approved by the International Union of Railways (UIC).

The Member Body of the following country expressed disapproval of the document on technical grounds :

U.S.S.R.

# Rolling bearings – Bearings with spherical outside surface and extended inner ring width – Eccentric locking collars

## 1 SCOPE AND FIELD OF APPLICATION

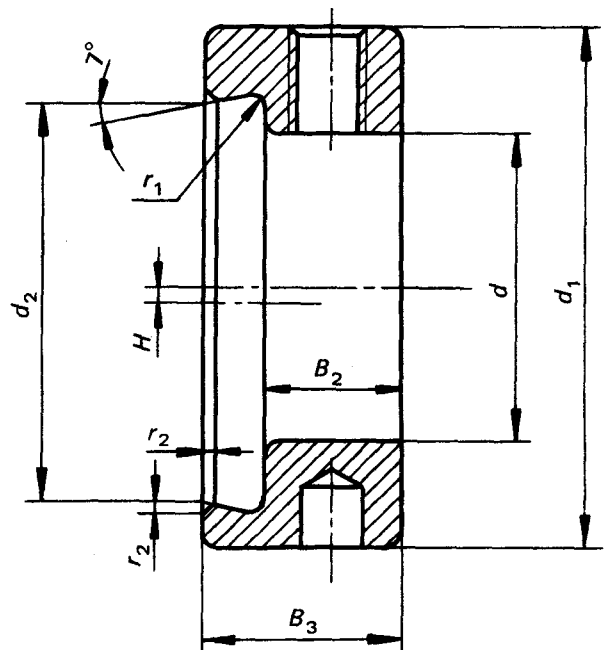
This International Standard specifies boundary dimensions and tolerances for eccentric locking collars used with rolling bearings with spherical outside surface and extended inner ring width, for which boundary dimensions are given in ISO 2264, *Rolling bearings – Bearings with spherical outside surface and extended inner ring width*, tables 1 and 3.

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## 2 SYMBOLS

- $d$  = collar bore diameter, nominal
- $d_1$  = collar outside diameter, nominal
- $d_2$  = small diameter of eccentric surface (at theoretical sharp corners at face of collar), nominal
- $B_2$  = collar bore width, nominal
- $B_3$  = collar width, nominal
- $H$  = eccentricity, nominal
- $\Delta_{ds}$  = collar bore diameter deviation
- $\Delta_{d2s}$  = deviation of small diameter of eccentric surface
- $\Delta_{Hs}$  = eccentricity deviation
- $r_1$  = fillet radius of eccentric surface, nominal
- $r_{1s\max}$  = the largest single fillet radius of eccentric surface
- $r_2$  = chamfer dimension of eccentric surface, nominal
- $r_{2s\min}$  = the smallest single chamfer dimension of eccentric surface



3 BOUNDARY DIMENSIONS

TABLE 1 – Eccentric locking collars for bearings with spherical outside surface and extended inner ring width – Diameter Series 2 – Wide and narrow overall width

Collar bore diameter		Eccentric locking collar														
$d$		$d_1$ max		$d_2$		$B_2$		$B_3$		$H$		$r_{2s}$ min		$r_{1s}$ max		
mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
12,700	1/2															
14,288	9/16															
15,875	5/8	28,6	1.13	21,6	0.850	9,5	0.374	13,5	0.531	0,8	0.031	0,8	0.031	0,4	0.016	
17																
17,462	11/16															
19,050	3/4	33,3	1.31	26,6	1.047	9,5	0.374	13,5	0.531	0,8	0.031	0,8	0.031	0,4	0.016	
20																
20,638	13/16															
22,225	7/8															
23,812	15/16	38,1	1.50	31,6	1.244	9,5	0.374	13,5	0.531	0,8	0.031	0,8	0.031	0,4	0.016	
25																
25,400	1															
26,988	1 1/16															
28,575	1 1/8															
30		44,5	1.75	37,9	1.492	11,9	0.469	15,9	0.626	0,8	0.031	0,8	0.031	0,4	0.016	
30,162	1 3/16															
31,750	1 1/4															
31,750	1 1/4															
33,338	1 5/16															
34,925	1 3/8	55,6	2.19	44,7	1.760	13,5	0.531	17,5	0.689	0,8	0.031	0,8	0.031	0,4	0.016	
35																
36,512	1 7/16															
38,100	1 1/2															
39,688	1 9/16	60,3	2.37	49,4	1.945	13,5	0.531	18,3	0.720	1,6	0.063	1,2	0.047	0,4	0.016	
40																
41,275	1 5/8															
42,862	1 11/16															
44,450	1 3/4	63,5	2.50	54,4	2.142	13,5	0.531	18,3	0.720	1,6	0.063	1,2	0.047	0,4	0.016	
45																
46,038	1 13/16															
47,625	1 7/8															
49,212	1 15/16	69,9	2.75	60,0	2.362	13,5	0.531	18,3	0.720	1,6	0.063	1,2	0.047	0,4	0.016	
50																
50,800	2															
50,800	2															
52,388	2 1/16															
53,975	2 1/8	76,2	3.00	66,9	2.634	15,9	0.626	20,7	0.815	1,6	0.063	1,2	0.047	0,4	0.016	
55																
55,562	2 3/16															
57,150	2 1/4															
58,738	2 5/16															
60		84,2	3.31	73,5	2.894	15,9	0.626	22,3	0.878	1,6	0.063	1,6	0.063	0,4	0.016	
60,325	2 3/8															
61,912	2 7/16															

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## 4 TOLERANCES

TABLE 2

Collar bore diameter $d$				Collar bore diameter deviation $\Delta_{ds}$				Deviation of small diameter of eccentric surface $\Delta_{d2s}$				Eccentricity deviation $\Delta_{Hs}$			
mm		in		mm		in		mm		in		mm		in	
over	incl.	over	incl.	high	low	high	low	high	low	high	low	high	low	high	low
—	36,512	—	1 7/16	+0,250	+0,025	+0.010	+0.001	+0,300	0	+0.012	0	+0,1	−0,1	+0.004	−0.004
36,512	61,912	1 7/16	2 7/16	+0,300	+0,025	+0.012	+0.001	+0,400	0	+0.016	0	+0,1	−0,1	+0.004	−0.004

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