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ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 1038

ROLLING BEARINGS

CYLINDRICAL ROLLER BEARINGS

RADIAL INTERNAL CLEARANCE

1st EDITION
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TC

BRIEF HISTORY

The ISO Recommendation R 1038, *Rolling bearings – Cylindrical roller bearings – Radial internal clearance,* was drawn up by Technical Committee ISO/TC 4, *Rolling bearings,* the Secretariat of which is held by the Sveriges Standardiseringskommission (SIS).

Work on this question led, in 1965, to the adoption of a Draft ISO Recommendation.

In April 1967, this Draft ISO Recommendation (No. 943) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	Hungary	Romania
Austria	India	Sweden
Belgium	Israel	Switzerland
Canada	Italy	Turkey
Chile	Japan	United Kingdom
Czechoslovakia	Korea, Rep. of	U.S.A.
France	Netherlands	U.S.S.R.
Germany	Poland	Yugoslavia

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in March 1969, to accept it as an ISO RECOMMENDATION.

ISO Recommendation R 1038 March 1969

ROLLING BEARINGS

CYLINDRICAL ROLLER BEARINGS

RADIAL INTERNAL CLEARANCE

1. SCOPE

This ISO Recommendation gives values of radial internal clearance for cylindrical roller bearings with matched and interchangeable sub-units for bearing bore diameters up to and including 500 mm.

The radial clearance is defined in ISO Recommendation R 200, *Rolling bearings – Internal clearance in unloaded bearings – Definitions.*

2. RADIAL CLEARANCE LIMITS

TABLE

Clearance values in microns

Bearing bore diameter *d* millimetres		Group 2 Interchangeable				Group 0 (Normal group) Interchangeable				Group 3 Interchangeable				Group 4 Interchangeable			
			Matched				Matched				Matched				Matched		
over	incl.	low	low	high	high	low	low	high	high	low	low	high	high	low	low	high	high
	10	0	10	20	30	10	20	30	40	25	35	45	55	35	45	55	65
(10)	18	0	10	20	30	10	20	30	40	25	35	45	55	35	45	55	65
(18)	24	0	10	20	30	10	20	30	40	25	35	45	55	35	45	55	65
(24)	30	0	10	25	30	10	25	35	45	30	40	50	65	40	50	60	70
(30)	40	0	12	25	35	15	25	40	50	35	45	55	70	45	55	70	80
(40)	50	5	15	30	40	20	30	45	55	40	50	65	75	55	65	80	90
(50)	65	5	15	35	45	20	35	50	65	45	55	75	90	65	75	90	105
(65)	80	5	20	40	55	25	40	60	75	55	70	90	105	75	90	110	125
(80)	100	10	25	45	60	30	45	70	80	65	80	105	115	90	105	125	140
(100)	120	10	25	50	65	35	50	80	90	80	95	120	135	105	120	145	160
(120)	140	10	30	60	75	40	60	90	105	90	105	135	155	115	135	160	180
(140)	160	15	35	65	80	50	65	100	115	100	115	150	165	130	150	180	195
(160)	180	20	35	75	85	60	75	110	125	110	125	165	175	150	165	200	215
(180)	200	25	40	80	95	65	80	120	135	125	140	180	195	165	180	220	235
(200)	225	30	45	90	105	75	–	–	150	140	–	–	215	180	–	–	255
(225)	250	40	50	100	115	90	–	–	165	155	–	–	230	205	–	–	280
(250)	280	45	55	110	125	100	–	–	180	175	–	–	255	230	–	–	310
(280)	315	50	60	120	135	110	–	–	195	195	–	–	280	255	–	–	340
(315)	355	55	65	135	145	125	–	–	215	215	–	–	305	280	–	–	370
(355)	400	65	75	150	160	140	–	–	235	245	–	–	340	320	–	–	415
(400)	450	70	–	–	190	155	–	–	275	270	–	–	390	355	–	–	455
(450)	500	85	–	–	205	180	–	–	300	300	–	–	420	395	–	–	515