UDC 621.822.6/.8 : 621.753.1

Ref. No.: ISO/R 201 - 1961 (E)

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION
R 201

ROLLING BEARINGS
RADIAL INTERNAL CLEARANCE IN UNLOADED RADIAL GROOVE TYPE BALL BEARINGS WITH CYLINDRICAL BORE
VALUES

1st EDITION
June 1961

withdrawn in 1981

Printed in Switzerland

Also issued in French and Russian. Copies to be obtained through the national standards organizations.

BRIEF HISTORY

The ISO Recommendation R 201, *Rolling Bearings. Radial Internal Clearance in Unloaded Radial Groove Type Ball Bearings with Cylindrical Bore—Values,* was drawn up by Technical Committee ISO/TC 4, *Ball and Roller Bearings,* the Secretariat of which is held by the Sveriges Standardiseringskommission (SIS).

Technical Committee ISO/TC 4 discussed the questions dealt with by this ISO Recommendation at the following meetings:

fourth meeting, held in Madrid, in May 1955,
fifth meeting, held in Vienna, in September 1956.

At the third meeting of the Technical Committee, Working Group No. 4 was appointed to assist the ISO/TC 4 Secretariat in preparatory work and in drawing up proposals regarding tolerances. The Working Group, composed of the following Member Bodies: France, Germany, Italy, Sweden, United Kingdom and U.S.A., held the following meetings:

first meeting, in Madrid, in May 1955,
second meeting, in Vienna, in September 1956.

On 11 July 1958, the Draft ISO Recommendation (No. 156—Chapter 4) was distributed to all the ISO Members and was approved, subject to some modifications, by the following Member Bodies:

Australia	India	Spain
Austria	Italy	Sweden
Brazil	Japan	Switzerland
Burma	Netherlands	United Kingdom
Canada	Poland	U.S.A.
France	Portugal	U.S.S.R.
Germany	Romania	Yugoslavia
Hungary		

One Member Body opposed the approval of the Draft: Czechoslovakia.

The Draft ISO Recommandation was then submitted to the ISO Council, which decided, in June 1961, to accept it as an ISO RECOMMENDATION.

ISO Recommendation R 201 June 1961

ROLLING BEARINGS

RADIAL INTERNAL CLEARANCE IN UNLOADED RADIAL GROOVE TYPE BALL BEARINGS WITH CYLINDRICAL BORE

VALUES

1. Values of the radial internal clearance as defined in ISO Recommendation R 200, are given in the table below.

2. In applying any particular measuring method, allowance should be made for the effect of measuring load and inherent variations in the apparatus. This may be effected by calibrating the devices with bearings whose looseness under no load has been accurately ascertained.

3. In principle the manufacturing limits are actual limits. On account of macro errors (out of roundness, etc.) these limits cannot at present be guaranteed to the bearing users. It is, however, expected that the bearings will fall inside the acceptance limits.

Table

Values in microns

Bearing bore diameter *d* in millimetres		Group 2				Normal Group				Group 3				Group 4			
		Acceptance limits				Acceptance limits				Acceptance limits				Acceptance limits			
			Manufacturing limits				Manufacturing limits				Manufacturing limits				Manufacturing limits		
Over	Incl.	Low	Low	High	High	Low	Low	High	High	Low	Low	High	High	Low	Low	High	High
(2.5)	10	—	0	6	7	2	4	11	13	8	10	20	23	—	—	—	—
(10)	18	—	0	8	9	3	5	15	18	11	13	23	25	18	20	30	33
(18)	24	—	0	9	10	5	7	17	20	13	15	25	28	20	23	33	36
(24)	30	—	0	10	11	5	8	18	20	13	15	25	28	23	25	38	41
(30)	40	—	0	10	11	6	8	18	20	15	18	30	33	28	30	43	46
(40)	50	—	0	10	11	6	8	20	23	18	20	33	36	30	33	48	51
(50)	65	—	3	13	15	8	10	25	28	23	25	41	43	38	41	58	61
(65)	80	—	3	13	15	10	13	28	30	25	28	48	51	46	48	69	71
(80)	100	—	3	15	18	12	15	33	36	30	33	56	58	53	56	81	84
(100)	120	—	3	18	20	15	18	38	41	36	38	63	66	61	63	94	97
(120)	140	—	3	20	23	18	20	46	48	41	46	76	81	71	76	109	114
(140)	160	—	3	20	23	18	20	51	53	46	51	86	91	81	86	124	130
(160)	180	—	3	23	25	20	23	58	61	53	58	97	102	91	97	140	147
(180)	200	—	3	28	30	25	28	69	71	63	69	112	117	107	112	157	163

Date of the first printing :
April 1961

Price: Sw. fr. 1.50