



Published 1980-05-15

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

Metric tapered roller bearings — Flanged cups — Boundary dimensions

ADDENDUM 2

Draft Addendum 2 to International Standard ISO 355-1977 was developed by Technical Committee ISO/TC 4, *Rolling bearings*, and was circulated to the member bodies in March 1979.

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

Australia	Hungary	Romania
Austria	India	South Africa, Rep. of
Canada	Italy	Spain
Chile	Japan	Sweden
China	Korea, Rep. of	Switzerland
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Egypt, Arab Rep. of	Mexico	USA
France	Netherlands	USSR
Germany, F. R.	Poland	

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No member body expressed disapproval of the document

[ISO 355:1977/Add 2:1980](#)

This International Standard cancels and replaces [ISO 2316:1973, Rolling bearings — Tapered roller bearings — Boundary dimensions — Sub-units — Metric series — Outer rings with flange](#).

1 Scope and field of application

This International Standard specifies flange dimensions of flanged cups for a selection of metric tapered roller bearings.

All other dimensions for cups and complete bearings are given in International Standard ISO 355. Tolerances are given in ISO/R 492 and ISO 582.

Flange dimensions suitable for flanged cups of bearings not comprised in the selection, are given in the annex, which does not form an integral part of this International Standard.

2 References

ISO 355, *Rolling bearings — Metric tapered roller bearings — Boundary dimensions and series designations*.

ISO/R 492, *Rolling bearings — Radial bearings — Tolerances*.

ISO 582, *Rolling bearings — Metric series bearings — Chamfer dimension limits*.

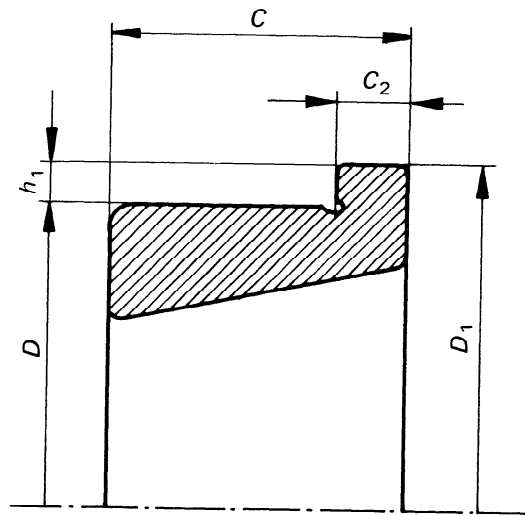
UDC 621.822.87

Ref. No. ISO 355-1977/Add. 2-1980 (E)

Descriptors : rolling bearings, roller bearings, taper roller bearings, specifications, dimensions, designations.

Price based on 7 pages

3 Symbols



D = bearing outside diameter, nominal

D_1 = flange outside diameter, nominal

C = cup width, nominal

C_2 = flange width, nominal

h_1 = flange height, nominal

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4 Flange dimensions

Tables 1 to 4 give outer ring flange dimensions for metric tapered roller bearings grouped by contact angle series. (Contact angle series and dimension series are given in ISO 355.)

Table 1 – Contact angle series 2

Dimensions in millimetres

D	D ₁	C ₂												
		Dimension series												
		2CD	2CE	2DB	2DD	2DE	2EE	2FB	2FD	2FE	2GB	2GD		
40	44			3	3									
42	46			—	—									
47	51			3	3				3	—				
									3	4				
52	57	3,5				—			3,5	4,5				
62	67	—				4,5			4	5				
65	70					4,5								
72	77		—											
75	79		4,5 ¹⁾			5			4	6				
						—			—	—				
75	80		4,5 ²⁾											
80	84		4,5											
80	85					5			4,5		6			
90	94		5						—	—				
90	95		—						4,5	6				
95	99		5											
100	104		5											
100	106								5	7				
110	116		5						5	8				
115	121		5						—	—				
120	127		—						5,5	8				
125	131		5,5						—	—				
130	136		5,5											
130	137		—						5,5	8				
140	146		6						—	—				
140	147		—									6	8	
145	151		6									—	—	
150	156		6											
150	158											7	10	
160	168							7,5				7	10	
170	178							8,5				—	—	
170	179							—				7	11	
180	188							8,5						
180	190											8	11	
190	200											8	11	
200	208								9			—	—	
200	210								—			8	11	
210	218							9						
215	225								—			9	12	
225	233								10			—	—	
225	236											9,5	12	
240	251											9,5	12	
260	272											11	13	

- 1) Bearing 2CE045
- 2) Bearing 2CE040

Table 2 – Contact angle series 3

Dimensions in millimetres

D	D ₁	C ₂												
		Dimension series												
		3CC	3CD	3CE	3DB	3DC	3DE	3EB	3EC	3EE	3FB	3FC	3FD	3FE
42	46	3												
44 52	48 57	3 3,5												
62 65	67 70				3,5 3,5	4 —								
68	72		3,5											
72 75	77 79	— 3,5			4 —	4,5 —								
80 80	84 85	3,5 —		— 4,5	— 4	— 4,5								
85	90			5	4	4,5	5							
90 90	94 95	4 —			4 —	4,5 —	5,5 —							
95 100	101 106			5 5	— 4,5	— 6	— 6							
110	116						5,5	4,5	5	7				
120 125	127 131	— 5					6	4,5	6	7				
125 130	132 137						6 6	5 —	6 —	7 7				
140	146	5,5												
140 150	147 158						7 8	5 5	6 7	8 9				
160 165	168 173									9 9	6 —	8 —	10 ¹⁾ —	
170	179										6,5	8	10	
175 180	184 190									9 9	— 7	— 8	— 10	
190 200	200 210										7 7	9 10	11 ²⁾ 10	
280	292												11	

1) Bearing 3FE090

2) Bearing 3FE105

Table 3 – Contact angle series 4

Dimensions in millimetres

D	D ₁	C ₂										
		Dimension series										
		4CB	4CC	4DB	4DC	4EB	4EC	4FB	4FC	4FD	4GB	4GD
45 47	49 51	– 3	– 3	3 –								
50 52	54 56	3 –	– 3									
55	59	3	3									
58 60	62 64	– 3	3 –									
62 65	66 69		3 –	– 3								
70 75	75 80	– 3		3 –								
85	90			3								
90 95	95 99			3 4								
95 100	100 104	3 –	– 4									
100	105	3										
105 110	111 116	3 3	– 4,5									
115 125	121 132	3 4	4,5 –									
130	136		5									
130 135	137 142	4 4		5 –	6 –							
140 145	147 151	4 –	– 5,5									
145	152	4										
150 150	156 157	– 4	5,5 –									
160 160	167 168	5 –			– 6,5							
170	177	5										
170 180	178 188				6,5 6,5							
185 195	192 202	5 5										
200	208						8					
210 215	218 225			6 –	8 –			– 8		– 11		
220 225	228 233			6 –				– 8,5				

Table 3 – Contact angle series 4 (concluded)

Dimensions in millimetres

D	D ₁	C ₂										
		Dimension series										
		4CB	4CC	4DB	4DC	4EB	4EC	4FB	4FC	4FD	4GB	4GD
230	238			6								
230 240	241 248			– 6			– 9	8 –		11 –		
250 260	261 268			– 7			– 10	9 –		12 –		
270	278			7								
270	282										9	12
290 320	298 330			7 –			– 8					
340 370	350 380			8 –			– 9					
400 420	410 432						10 10					

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Table 4 – Contact angle series 7

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Dimensions in millimetres

D	D ₁	C ₂	
		Dimension series	
		7FB	7GB
62	67	4	
72 80	77 85	4 4,5	
90 100	95 106	4,5 5	
110	116	5	
120 130	127 137	5,5 5,5	
140 150	147 158		6 7
160	168		7
170 180	179 190		7 8
190 200	200 210		8 8
215 225	225 236		9 9,5
240 260	251 272		9,5 11

Annex

Flange dimensions for additional cups

(Not part of this Standard.)

A.1 Scope and field of application

This annex gives flange dimensions suitable for use in cases where a flanged cup execution of a metric tapered roller bearing is desirable, but flange dimensions are not given in the body of this International Standard. The flanged cup thus obtained must be considered as a non-standard sub-unit, until its inclusion into the body of the International Standard has been agreed by ISO.

A.2 Flange dimensions

Table 5 — Flange width

Dimensions in millimetres

C		C ₂				
		Contact angle series ¹⁾				
		2	3	4	5	6 and 7
Over	Incl.					
	16	3	3	3	3	3
16	19	3	4	4	4	4
19	22	4	5	5	5	6
22	25	5	6	6	6	7
25	28	6	6	7	7	8
28	31	6	7	8	8	9
31	35	7	8	9	9	10
35	40	8	9	10	11	11
40	45	9	10	11	12	12
45	52	10	11	12	13	13
52	60	10	12	13	14	14
60	70	11	13	14	15	15

Table 6 — Flange height

Dimensions in millimetres

C ₂	D		h ₁
	Over	Incl.	
3	—	65	2
	65	100	2,5
	100	—	3
5	—	all	3,5
	—	all	3,5
	—	all	4
	—	all	4
	—	all	5
10	—	400	5
	400	—	6
11	—	all	6
	—	all	6
	—	all	6
	—	all	7
	—	all	7

1) Contact angle series are given in ISO 355.

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