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Rolling bearings — Tapered roller bearings — Boundary dimensions and series designations

Roulements — Roulements à rouleaux coniques — Dimensions d'encombrement et désignation des séries

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 4, *Rolling bearings*, Subcommittee SC 9, *Tapered roller bearings*.

This third edition cancels and replaces the second edition (ISO 355:2007), which has been technically revised. It also incorporates the Amendment ISO 355:2007/Amd.1:2012. The main changes compared to the previous edition are as follows:

— Contact angle and smallest single chamfer dimension of the inner ring back face added to the double-row bearing tables.

— Tables with all dimensions added for bearings with flanged outer rings.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Rolling bearings — Tapered roller bearings — Boundary dimensions and series designations

1 Scope

This document specifies bearing and subunit boundary dimensions for complete single-row and double-row tapered roller bearings. It also specifies the flange dimensions of flanged outer rings for a selection of these bearings. A series designation for each bearing is also specified.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 492, *Rolling bearings — Radial bearings — Geometrical product specifications (GPS) and tolerance values*

ISO 582, *Rolling bearings — Chamfer dimensions — Maximum values*

ISO 1132-1, *Rolling bearings — Tolerances — Part 1: Terms and definitions*

ISO 5593, *Rolling bearings — Vocabulary*

ISO 15241, *Rolling bearings — Symbols for physical quantities*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1132-1 and ISO 5593 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Symbols

For the purposes of this document, the symbols given in ISO 15241 and the following apply.

The symbols shown in Figures 1 to 4 and the values given in Tables 4 to 16 denote nominal dimensions unless specified otherwise.

B inner ring width, single-row bearing

B_1 overall width of inner rings of double-row tapered roller bearing or matched pair of tapered roller bearings with spacer

C outer ring width, single-row bearing

C_1 width of outer ring flange

C_2 width of double outer ring, or overall width of outer rings of matched pair of tapered roller bearings with spacers

D outside diameter of outer ring

D_1 outside diameter of outer ring flange

d bore diameter of inner ring

E inside diameter of outer ring back face

h_1 height of outer ring flange

r chamfer dimension of inner ring back face

$r_{s\,min}$ smallest single chamfer dimension of inner ring back face

r_1 chamfer dimension of outer ring back face

$r_{1s\,min}$ smallest single chamfer dimension of outer ring back face

r_2 chamfer dimension of inner ring and outer ring front face

T bearing width, single-row bearing
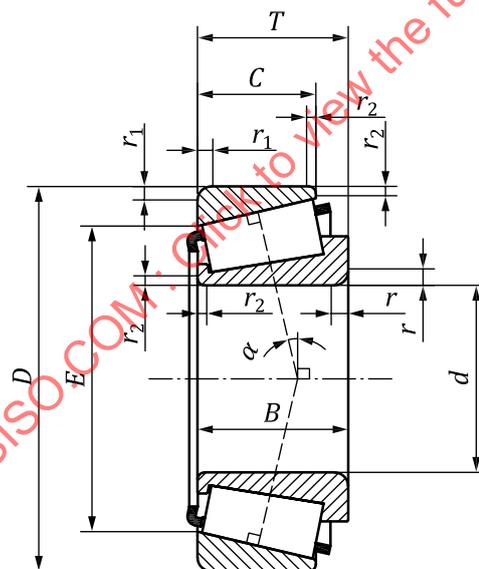
α contact angle

NOTE   In the case of tapered roller bearings, the contact angle is the same as the half included outer ring raceway angle.

Figure 1 — Single-row tapered roller bearing
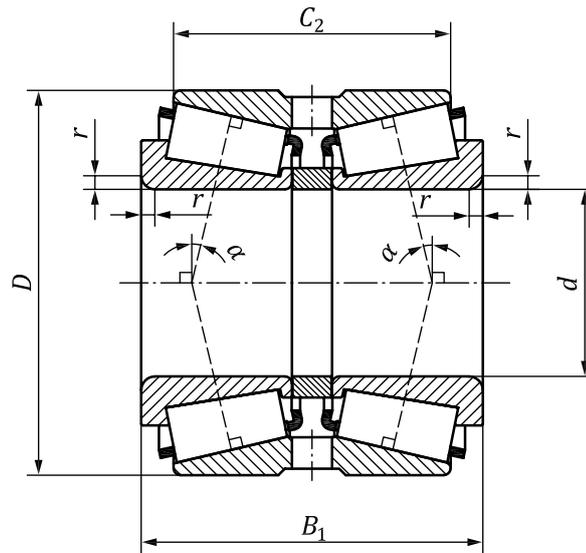
NOTE   The double-row bearing outer ring can have a lubrication groove and holes.

Figure 2 — Double-row tapered roller bearing with double raceway outer ring
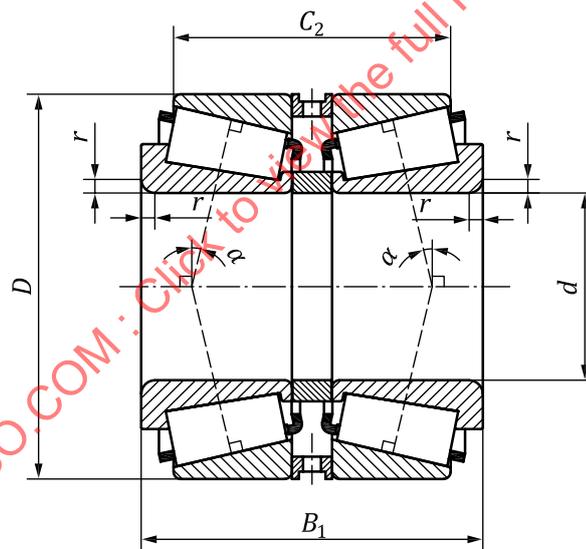
NOTE   The outer spacer can have a lubrication groove and holes.

Figure 3 — Matched pair of tapered roller bearings in back-to-back arrangement with spacers
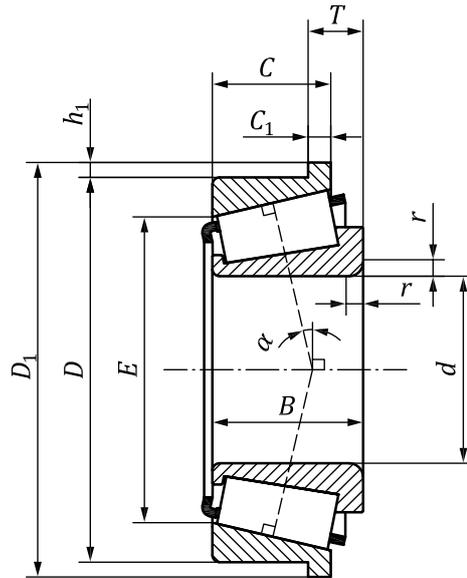
Figure 4 — Single-row tapered roller bearing with flanged outer ring

5 Series designations

Each bearing whose dimensions are given in this document is referred to a dimension series. The dimension series is designated by a combination of three symbols, for example 2AC. The dimension series designation can be used to build a tapered roller bearing designation according to ISO 10317[1].

The first symbol is a numeric character, which represents a range of contact angles (contact angle series).

The second symbol is an alphabetic character, which represents a range of numeric values for the outside diameter to bore relationship (diameter series).

The third symbol is an alphabetic character, which represents a range of numeric values for the width to height relationship of a single-row bearing (width series).

The designations for the standardized bearings generally conform with the angle ranges and the numeric values for the relationships given in Tables 1 to 3. In some cases, an exception has been made to avoid the condition that the same designation be used for two different bearings with the same bore diameter.

The series designations shown in this clause shall not be applied to bearings other than those specified in Clause 6.

Table 1 — Designation of contact angle series

Designation of contact angle series	α	
	>	≤
1	Reserved for future use	
2	10°	13° 52'
3	13° 52'	15° 59'
4	15° 59'	18° 55'
5	18° 55'	23°
6	23°	27°
7	27°	30°

Table 2 — Designation of diameter series

Designation of diameter series	$\dfrac{D}{d^{0,77}}$	
	>	≤
A	Reserved for future use	
B	3,4	3,8
C	3,8	4,4
D	4,4	4,7
E	4,7	5
F	5	5,6
G	5,6	7

Table 3 — Designation of width series

Designation of width series	$\dfrac{T}{(D-d)^{0,95}}$	
	>	≤
A	Reserved for future use	
B	0,5	0,68
C	0,68	0,8
D	0,8	0,88
E	0,88	1

6 Boundary dimensions

6.1 General

The bearing and subunit boundary dimensions given in Tables 4 to 16 are grouped by contact angle series and then listed in ascending order of bore, outside diameter and bearing width. Tolerances for the dimensions shall be as given in ISO 492. Maximum chamfer dimensions shall be in accordance with ISO 582.

In this document, no values are given for the inner ring and outer ring front face chamfer dimension, r_2. However, the front face corners shall not be sharp.

6.2 Single-row tapered roller bearings

Boundary dimensions for contact angle series 2, 3, 4, 5 and 7 are given in Tables 4, 5, 6, 7 and 8 respectively.

Table 4 — Contact angle series 2

Dimensions in millimetres

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
15	42	14,25	13	1	11	1	10° 45' 29''	33,272	2FB
17	40	13,25	12	1	11	1	12° 57' 10''	31,408	2DB
17	40	17,25	16	1	14	1	11° 45'	31,17	2DD
17	47	15,25	14	1	12	1	10° 45' 29''	37,42	2FB
17	47	20,25	19	1	16	1	10° 45' 29''	36,09	2FD
20	37	12	12	0,3	9	0,3	12°	29,621	2BD
20	45	17	17,5	1	13,5	1	12°	35,815	2DC
20	47	15,25	14	1	12	1	12° 57' 10''	37,304	2DB
20	47	19,25	18	1	15	1	12° 28'	35,81	2DD
20	50	22	22	2	18,5	1,5	12° 30'	38,063	2ED
20	52	16,25	15	1,5	13	1,5	11° 18' 36''	41,318	2FB
20	52	22,25	21	1,5	18	1,5	11° 18' 36''	39,518	2FD
22	40	12	12	0,3	9	0,3	12°	32,665	2BC
22	47	17	17,5	1	13,5	1	12° 35'	37,542	2CC
22	52	22	22	2	18,5	1,5	12° 14'	40,548	2ED
25	42	12	12	0,3	9	0,3	12°	34,608	2BD
25	47	17	17	0,6	14	0,6	10° 55'	38,278	2CE
25	50	17	17,5	1,5	13,5	1	13° 30'	40,205	2CC
25	52	19,25	18	1	16	1	13° 30'	41,331	2CD
25	52	22	22	1	18	1	13° 10'	40,441	2DE[b]
25	58	26	26	2	21	1,5	12° 30'	44,805	2EE
25	62	18,25	17	1,5	15	1,5	11° 18' 36''	50,637	2FB
25	62	25,25	24	1,5	20	1,5	11° 18' 36''	48,637	2FD
28	45	12	12	0,3	9	0,3	12°	37,639	2BD
28	55	19	19,5	1,5	15,5	1,5	12° 10'	44,888	2CD
28	58	24	24	1	19	1	12° 45'	45,846	2DE
28	65	27	27	2	22	2	12° 45'	50,33	2ED
30	47	12	12	0,3	9	0,3	12°	39,617	2BD
30	55	20	20	1	16	1	11°	45,283	2CE
30	58	19	19,5	1,5	15,5	1,5	12° 50'	47,309	2CD
30	62	25	25	1	19,5	1	12° 50'	49,524	2DE
30	68	29	29	2	24	2	12° 28'	52,696	2EE
30	72	20,75	19	1,5	16	1,5	11° 51' 35''	58,287	2FB
30	72	28,75	27	1,5	23	1,5	11° 51' 35''	55,767	2FD

[a]   Maximum chamfer dimensions are given in ISO 582.

[b]   Dimension series deviates from the rules in Clause 5.

Table 4 *(continued)*

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
32	52	14	15	0,6	10	0,6	12°	44,261	2BD
32	62	21	21	1,5	17	1,5	12° 30'	50,554	2CD
32	65	26	26	1	20,5	1	13°	51,791	2DE
32	72	29	29	2	24	2	12° 41' 30''	56,151	2ED
35	55	14	14	0,6	11,5	0,6	11°	47,22	2BD
35	62	21	21	1	17	1	11° 30'	51,32	2CE
35	68	23	23	2	18,5	2	12° 35'	55,4	2DD
35	72	28	28	1,5	22	1,5	13° 15'	57,186	2DE
35	78	33	32,5	2,5	27	2	12° 12'	61,925	2EE[b]
35	80	22,75	21	2	18	1,5	11° 51' 35''	65,769	2FB
35	80	32,75	31	2	25	1,5	11° 51' 35''	62,829	2FE
40	62	15	15	0,6	12	0,6	10° 55'	53,388	2BC
40	68	22	22	1	18	1	10° 40'	57,29	2BE[b]
40	75	24	24	2	19,5	2	12° 07'	62,155	2CD
40	75	26	26	1,5	20,5	1,5	13° 20'	61,169	2CE
40	80	32	32	1,5	25	1,5	13° 25'	63,405	2DE
40	85	33	32,5	2,5	28	2	12° 55'	66,612	2EE
40	90	25,25	23	2	20	1,5	12° 57' 10''	72,703	2FB
40	90	35,25	33	2	27	1,5	12° 57' 10''	69,253	2FD
45	68	15	15	0,6	12	0,6	12°	58,852	2BC
45	75	24	24	1	19	1	11° 05'	63,116	2CE
45	80	24	24	2	19,5	2	13°	66,615	2CD
45	95	36	35	2,5	30	2,5	12° 09'	75,712	2ED[b]
45	100	27,25	25	2	22	1,5	12° 57' 10''	81,78	2FB
45	100	38,25	36	2	30	1,5	12° 57' 10''	78,33	2FD
50	72	15	15	0,6	12	0,6	12° 50'	62,748	2BC
50	80	24	24	1	19	1	11° 55'	67,775	2CE
50	82	21,5	21,5	3	17	0,5	11° 30'	70,594	2CC
50	85	24	24	2	19,5	2	13° 52'	70,969	2CD
50	90	28	28	3	23	2,5	12° 22'	74,538	2DD
50	100	36	35	2,5	30	2,5	12° 51'	79,996	2ED
50	110	29,25	27	2,5	23	2	12° 57' 10''	90,633	2FB
50	110	42,25	40	2,5	33	2	12° 57' 10''	86,263	2FD
55	80	17	17	1	14	1	11° 39'	69,503	2BC
55	85	18	18,5	2	14	2	12° 49'	73,586	2CC

[a] Maximum chamfer dimensions are given in ISO 582.

[b] Dimension series deviates from the rules in Clause 5.

Table 4 *(continued)*

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
55	90	27	27	1,5	21	1,5	11° 45'	76,656	2CE
55	95	27	27	2	21,5	2	12° 43' 30''	80,106	2CD
55	95	29	29	1,5	23,5	2,5	12° 35'	79,593	2DD[b]
55	110	39	39	2,5	32	2,5	13°	88,446	2ED[b]
55	120	31,5	29	2,5	25	2	12° 57' 10''	99,146	2FB
55	120	45,5	43	2,5	35	2	12° 57' 10''	94,316	2FD
60	85	17	17	1	14	1	12° 27'	74,185	2BC
60	90	18	18,5	2	14	2	13° 38' 30''	78,249	2CC
60	95	27	27	1,5	21	1,5	12° 20'	80,422	2CE
60	100	27	27	2	21,5	2	13° 27'	84,587	2CD
60	115	40	39	2,5	33	2,5	12° 30'	93,46	2EE
60	130	33,5	31	3	26	2,5	12° 57' 10''	107,769	2FB
60	130	48,5	46	3	37	2,5	12° 57' 10''	102,939	2FD
65	90	17	17	1	14	1	13° 15'	78,849	2BC
65	100	22	22	2	17,5	2	12° 10' 30''	87,433	2CC
65	100	27	27	1,5	21	1,5	13° 05'	85,257	2CE
65	110	31	31	2	25	2	12° 27'	93,09	2DD
65	120	39	38,5	3	32	2,5	12° 40'	98,572	2ED
65	125	43	42	2,5	35	2,5	12°	102,378	2FD
65	140	36	33	3	28	2,5	12° 57' 10''	116,846	2GB
65	140	51	48	3	39	2,5	12° 57' 10''	111,786	2GD
70	100	20	20	1	16	1	11° 53'	88,59	2BC
70	105	22	22	2	17,5	2	12° 49' 30''	92,004	2CC
70	110	31	31	1,5	25,5	1,5	10° 45'	95,021	2CE
70	120	34	33	2	27	2	12° 22'	101,343	2DD
70	130	43	42	3	35	2,5	12° 31' 30''	106,766	2ED
70	150	38	35	3	30	2,5	12° 57' 10''	125,244	2GB
70	150	54	51	3	42	2,5	12° 57' 10''	119,724	2GD
75	105	20	20	1	16	1	12° 31'	93,223	2BC
75	115	25	25	2	20	2	12°	100,414	2CC
75	115	31	31	1,5	25,5	1,5	11° 15'	99,4	2CE
75	125	34	33	2,5	27	2	12° 55'	105,786	2DD
75	135	43	42	3	35	2,5	13° 03'	111,153	2ED
75	145	51	51	3	42	2,5	13° 34'	117,744	2FE
75	160	40	37	3	31	2,5	12° 57' 10''	134,097	2GB
75	160	58	55	3	45	2,5	12° 57' 10''	127,887	2GD

[a]   Maximum chamfer dimensions are given in ISO 582.

[b]   Dimension series deviates from the rules in Clause 5.

Table 4 *(continued)*

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
80	110	20	20	1	16	1	13° 10'	97,974	2BC
80	120	25	25	2	20	2	12° 33' 30''	105,003	2CC
80	125	36	36	1,5	29,5	1,5	10° 30'	107,75	2CE
80	130	34	33	2,5	27	2	13° 30'	110,475	2DD
80	145	46	45	3	38	2,5	12° 02'	120,366	2ED
80	170	42,5	39	3	33	2,5	12° 57' 10''	143,174	2GB
80	170	61,5	58	3	48	2,5	12° 57' 10''	136,504	2GD
85	120	23	23	1,5	18	1,5	12° 18'	106,599	2BC[b]
85	125	25	25	2,5	20	2	13° 07' 30''	109,65	2CC
85	130	36	36	1,5	29,5	1,5	11°	112,838	2CE
85	135	34	33	2,5	28	2	13° 02'	115,904	2DD
85	150	46	46	3	38	3	12° 30'	124,965	2ED
85	180	44,5	41	4	34	3	12° 57' 10''	150,433	2GB
85	180	63,5	60	4	49	3	12° 57' 10''	144,223	2GD
90	125	23	23	1,5	18	1,5	12° 51'	111,282	2BC[b]
90	135	28	27,5	2,5	23	2	12° 01' 30''	119,139	2CC
90	140	34	33	2,5	28	2,5	12° 02' 30''	121,86	2CD
90	140	39	39	2	32,5	1,5	10° 10'	122,363	2CE
90	155	44	44	3	35,5	2,5	12° 48' 40''	130,944	2EC[b]
90	155	46	46	3	38	3	12° 17'	130,206	2ED
90	165	47	46	3	39	3	12°	140,251	2FC
90	190	46,5	43	4	36	3	12° 57' 10''	159,061	2GB
90	190	57,15	57,531	8	46,038	3,3	12° 35'	157,96	2GC
90	190	67,5	64	4	53	3	12° 57' 10''	151,701	2GD
95	130	23	23	1,5	18	1,5	13° 25'	116,082	2BC[b]
95	140	28	27,5	2,5	23	2,5	12° 30'	123,797	2CC
95	145	34	33	2,5	28	2,5	12° 30'	126,419	2CD
95	145	39	39	2	32,5	1,5	10° 30'	126,346	2CE
95	160	46	46	3	38	3	12° 43'	134,711	2ED
95	200	49,5	45	4	38	3	12° 57' 10''	165,861	2GB
95	200	71,5	67	4	55	3	12° 57' 10''	160,318	2GD
100	140	25	25	1,5	20	1,5	12° 23'	125,717	2CC
100	145	28	27,5	2,5	23	2,5	12° 58' 30''	128,448	2DC[b]
100	150	34	33	2,5	28	2,5	12° 57' 30''	130,992	2CD
100	150	39	39	2	32,5	1,5	10° 50'	130,323	2CE
100	165	47	46	3	39	3	12°	140,251	2EE
100	215	51,5	47	4	39	3	12° 57' 10''	178,578	2GB

[a] Maximum chamfer dimensions are given in ISO 582.

[b] Dimension series deviates from the rules in Clause 5.

Table 4 *(continued)*

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
100	215	66,675	66,675	7	53,975	3,3	12° 15'	177,891	2GC
100	215	77,5	73	4	60	3	12° 57' 10''	171,65	2GD
105	145	25	25	1,5	20	1,5	12° 51'	130,359	2CC
105	155	33	31,5	2,5	27	2,5	12° 17' 30''	137,045	2CD
105	160	38	37	3	31	2,5	12° 17' 30''	139,734	2DD
105	160	43	43	2,5	34	2	10° 40'	139,304	2DE
105	170	47	46	3	39	3	12° 18' 30''	145,104	2EE
105	225	53,5	49	4	41	3	12° 57' 10''	186,752	2GB
105	225	81,5	77	4	63	3	12° 57' 10''	179,359	2GD
110	150	25	25	1,5	20	1,5	13° 20'	135,182	2CC
110	160	33	31,5	2,5	27	2,5	12° 42' 30''	141,607	2CD
110	165	38	37	3	31	2,5	12° 42' 30''	144,376	2DD
110	170	47	47	2,5	37	2	10° 50'	146,265	2DE
110	175	47	46	4	39	3	12° 41' 30''	149,543	2EE[b]
110	240	54,5	50	4	42	3	12° 57' 10''	199,925	2GB
110	240	84,5	80	4	65	3	12° 57' 10''	192,071	2GD
120	165	29	29	1,5	23	1,5	13° 05'	148,464	2CC
120	175	36	35	2,5	29	2,5	12° 08'	155,479	2DC[b]
120	180	41	40	3	33	2,5	12° 08' 30''	158,233	2DD
120	180	48	48	2,5	38	2	11° 30'	154,777	2DE
120	190	50	49	4	41	3	12° 09' 30''	163,635	2EE
120	260	59,5	55	4	46	3	12° 57' 10''	214,892	2GB
120	260	90,5	86	4	69	3	12° 57' 10''	207,039	2GD
130	180	32	32	2	25	1,5	12° 45'	161,652	2CC
130	185	36	35	3	29	2,5	12° 52'	164,714	2DC[b]
130	190	41	40	3	33	2,5	12° 51' 30''	167,414	2DD
130	200	50	49	4	41	3	12° 50' 30''	172,653	2DE[b]
130	200	55	55	2,5	43	2	12° 50'	172,017	2EE
130	280	63,75	58	5	49	4	12° 57' 10''	232,028	2GB
140	190	32	32	2	25	1,5	13° 30'	171,032	2CC
140	200	39	38	3	31	2,5	12°	179,234	2DC
140	205	44	43	3	36	2,5	12°	181,645	2DD
140	210	56	56	2,5	44	2	13° 30'	180,353	2DE
140	215	53	52	4	44	3	12°	187,051	2ED
140	300	67,75	62	5	53	4	12° 57' 10''	247,91	2GB

[a]   Maximum chamfer dimensions are given in ISO 582.

[b]   Dimension series deviates from the rules in Clause 5.

Table 4 *(continued)*

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
150	210	38	38	2,5	30	2	12° 20'	187,926	2DC
150	215	44	43	3	36	3	12° 37'	190,81	2DD
150	225	53	52	4	44	4	12° 35' 30''	196,097	2ED
150	225	59	59	3	46	2,5	13° 40'	194,26	2EE
150	320	72	65	5	55	4	12° 57' 10''	265,955	2GB
160	220	38	38	2,5	30	2	13°	197,962	2DC
160	225	44	43	3	36	3	13° 14' 30''	200,146	2DD
160	235	53	52	4	44	4	13° 11' 30''	205,257	2ED
160	340	75	68	5	58	4	12° 57' 10''	282,751	2GB
170	235	44	43	3	36	3	12° 13' 30''	211,345	2DD
170	245	53	52	5	44	4	12° 14'	216,61	2ED[b]
170	360	80	72	5	62	4	12° 57' 10''	299,991	2GB
180	240	39	38	3	31	3	12° 47'	218,311	2DC
180	245	44	43	3	36	3	12° 46' 30''	220,684	2DD
180	255	53	52	5	44	4	12° 46'	225,875	2ED[b]
190	255	41	40	3	33	3	12° 15'	232,395	2DC
190	260	47	46	4	38	3	12° 15'	234,615	2DD
190	270	56	55	5	46	4	12° 15' 30''	240,017	2ED
200	265	41	40	3	33	3	12° 45'	241,71	2DC
200	270	47	46	4	38	3	12° 45'	244,043	2DD
200	280	56	55	5	46	4	12° 44' 30''	249,3	2ED
220	285	41	40	4	33	3	12°	262,657	2DC
220	290	47	46	4	38	3	12°	265,261	2DD
220	300	56	55	5	46	4	12° 04' 30''	270,389	2ED
240	305	41	40	4	33	3	12° 53'	281,653	2DC
240	310	47	46	4	38	3	12° 52'	284,085	2DD
240	320	57	56	6	46	4	12° 55' 30''	289,075	2EE
260	325	41	40	4	33	4	13° 46'	300,661	2DC
260	330	47	46	4	38	4	13° 44' 30''	303,004	2DD
260	340	57	56	6	46	4	12° 07' 30''	310,322	2DE
280	360	57	56	6	46	5	12° 52' 30''	329,164	2DE

[a] Maximum chamfer dimensions are given in ISO 582.

[b] Dimension series deviates from the rules in Clause 5.

Table 5 — Contact angle series 3

Dimensions in millimetres

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
20	42	15	15	0,6	12	0,6	14°	32,781	3CC
22	44	15	15	0,6	11,5	0,6	14° 50'	34,708	3CC
25	52	16,25	15	1	13	1	14° 02' 10''	41,135	3CC
30	62	17,25	16	1	14	1	14° 02' 10''	49,99	3DB
30	62	21,25	20	1	17	1	14° 02' 10''	48,982	3DC
32	65	18,25	17	1	15	1	14°	52,5	3DB
35	72	18,25	17	1,5	15	1,5	14° 02' 10''	58,844	3DB
35	72	24,25	23	1,5	19	1,5	14° 02' 10''	57,087	3DC
40	68	19	19	1	14,5	1	14° 10'	56,897	3CD
40	80	19,75	18	1,5	16	1,5	14° 02' 10''	65,73	3DB
40	80	24,75	23	1,5	19	1,5	14° 02' 10''	64,715	3DC
45	75	20	20	1	15,5	1	14° 40'	63,248	3CC
45	80	26	26	1,5	20,5	1,5	14° 20'	65,7	3CE
45	85	20,75	19	1,5	16	1,5	15° 06' 34''	70,44	3DB
45	85	24,75	23	1,5	19	1,5	15° 06' 34''	69,61	3DC
45	85	32	32	1,5	25	1,5	14° 25'	68,075	3DE
50	80	20	20	1	15,5	1	15° 45'	67,841	3CC
50	85	26	26	1,5	20	1,5	15° 20'	70,214	3CE
50	90	21,75	20	1,5	17	1,5	15° 38' 32''	75,078	3DB
50	90	24,75	23	1,5	19	1,5	15° 38' 32''	74,226	3DC
50	90	32	32	1,5	24,5	1,5	15° 25'	72,727	3DE
55	90	23	23	1,5	17,5	1,5	15° 10'	76,505	3CC
55	90	23	23	1,5	18,5	0,5	15°	75,417	3CB[b]
55	95	30	30	1,5	23	1,5	14°	78,893	3CE
55	100	22,75	21	2	18	1,5	15° 06' 34''	84,197	3DB
55	100	26,75	25	2	21	1,5	15° 06' 34''	82,837	3DC
55	100	35	35	2	27	1,5	14° 55'	81,24	3DE
60	95	24	24	5	19	2,5	15°	80,256	3CD
60	100	30	30	1,5	23	1,5	14° 50'	83,522	3CE
60	110	23,75	22	2	19	1,5	15° 06' 34''	91,876	3EB

[a] Maximum chamfer dimensions are given in ISO 582.

[b] Dimension series deviates from the rules in Clause 5.

Table 5 *(continued)*

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
60	110	29,75	28	2	24	1,5	15° 06' 34''	90,236	3EC
60	110	38	38	2	29	1,5	15° 05'	89,032	3EE
65	110	28	28	3	22,5	2,5	15°	91,897	3DC
65	110	34	34	1,5	26,5	1,5	14° 30'	91,653	3DE
65	120	24,75	23	2	20	1,5	15° 06' 34''	101,934	3EB
65	120	32,75	31	2	27	1,5	15° 06' 34''	99,484	3EC
65	120	41	41	2	32	1,5	14° 35'	97,863	3EE
65	135	52	51	5	43	3	15° 55' 30''	102,611	3FE
70	120	37	37	2	29	1,5	14° 10'	99,733	3DE
70	125	26,25	24	2	21	1,5	15° 38' 32''	105,748	3EB
70	125	33,25	31	2	27	1,5	15° 38' 32''	103,765	3EC
70	125	41	41	2	32	1,5	15° 15'	102,275	3EE
75	125	37	37	2	29	1,5	14° 50'	104,358	3DE
75	130	41	41	2	31	1,5	15° 55'	106,675	3EE[b]
75	145	52	51	5	43	3	15° 57'	112,507	3FE
80	125	29	29	1,5	22	1,5	15° 45'	107,334	3CC
80	130	35	34	3	28,5	2,5	14° 31'	108,958	3DD
80	130	37	37	2	29	1,5	15° 30'	108,97	3DE
80	140	28,25	26	2,5	22	2	15° 38' 32''	119,169	3EB
80	140	35,25	33	2,5	28	2	15° 38' 32''	117,466	3EC
80	140	46	46	2,5	35	2	15° 50'	114,582	3EE
85	140	39	38	3	31,5	2,5	15° 11'	116,301	3DD
85	140	41	41	2,5	32	2	15° 10'	117,097	3DE
85	150	30,5	28	2,5	24	2	15° 38' 32''	126,685	3EB
85	150	38,5	36	2,5	30	2	15° 38' 32''	124,97	3EC
85	150	49	49	2,5	37	2	15° 35'	122,894	3EE
85	160	55	54	5	45	3	15° 43'	126,101	3FE
90	140	32	32	2	24	1,5	15° 45'	119,948	3CC
90	150	45	45	2,5	35	2	14° 50'	125,283	3DE
90	160	32,5	30	2,5	26	2	15° 38' 32''	134,901	3FB
90	160	42,5	40	2,5	34	2	15° 38' 32''	132,615	3FC
90	160	55	55	2,5	42	2	15° 40'	129,82	3FE
95	160	49	49	2,5	38	2	14° 35'	133,24	3EE
95	170	34,5	32	3	27	2,5	15° 38' 32''	143,385	3FB

[a] Maximum chamfer dimensions are given in ISO 582.

[b] Dimension series deviates from the rules in Clause 5.

Table 5 *(continued)*

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
95	170	45,5	43	3	37	2,5	15° 38' 32''	140,259	3FC
95	170	58	58	3	44	2,5	15° 15'	138,642	3FE
100	165	52	52	2,5	40	2	15° 10'	137,129	3EE
100	180	37	34	3	29	2,5	15° 38' 32''	151,31	3FB
100	180	49	46	3	39	2,5	15° 38' 32''	148,184	3FC
100	180	63	63	3	48	2,5	15° 05'	145,949	3FE
105	175	56	56	2,5	44	2	15° 05'	144,427	3EE
105	190	39	36	3	30	2,5	15° 38' 32''	159,795	3FB
105	190	53	50	3	43	2,5	15° 38' 32''	155,269	3FC
105	190	68	68	3	52	2,5	15°	153,622	3FE
110	180	56	56	2,5	43	2	15° 35'	149,127	3EE
110	190	58	57	6	47	3	15° 48'	154,133	3FE
110	200	41	38	3	32	2,5	15° 38' 32''	168,548	3FB
110	200	56	53	3	46	2,5	15° 38' 32''	164,022	3FC
120	200	62	62	2,5	48	2	14° 50'	166,144	3FE
130	210	58	57	6	47	4	15° 50' 30''	174,091	3EE
150	235	61	59	6	50	4	15° 53'	196,798	3EE
170	230	38	38	2,5	30	2	14° 20'	206,564	3DC
170	230	39	38	3	31	2,5	14° 20'	206,562	3DD[b]
170	255	61	59	6	50	4	15° 55'	216,949	3EE
180	280	64	64	3	48	2,5	15° 45'	239,898	3FD
190	280	64	62	6	52	4	15° 58' 30''	239,995	3EE
200	280	51	51	3	39	2,5	14° 45'	249,698	3EC
200	360	104	98	5	82	4	15° 10'	294,88	3GD
220	300	51	51	3	39	2,5	15° 50'	267,685	3EC
260	360	63,5	63,5	3	48	2,5	15° 10'	320,783	3EC

[a] Maximum chamfer dimensions are given in ISO 582.

[b] Dimension series deviates from the rules in Clause 5.

Table 5 *(continued)*

d	D	T	B	$r_{s\ min}$[a]	C	$r_{1s\ min}$[a]	α	E	Dimension series
300	420	76	76	4	57	3	14° 45'	374,706	3FD
320	440	76	76	4	57	3	15° 30'	393,406	3FD

[a] Maximum chamfer dimensions are given in ISO 582.

[b] Dimension series deviates from the rules in Clause 5.

Table 6 — Contact angle series 4

Dimensions in millimetres

d	D	T	B	$r_{s\ min}$[a]	C	$r_{1s\ min}$[a]	α	E	Dimension series
20	45	14	14	1	10	1	16° 40'	35,679	4DB
22	47	14	14	1	10	1	17° 30'	37,443	4CB
25	47	15	15	0,6	11,5	0,6	16°	37,393	4CC
25	50	14	14	1	10	1	18° 45'	40,025	4CB
28	52	16	16	1	12	1	16°	41,991	4CC
28	55	15	14,5	1	11	1	17° 30'	44,597	4CB
30	55	17	17	1	13	1	16°	44,438	4CC
30	60	17	16,5	1	12,5	1	17° 30'	48,465	4CB
32	58	17	17	1	13	1	16° 50'	46,708	4CC
32	65	18	17,5	1	13,5	1	17° 30'	52,418	4DB
35	62	18	18	1	14	1	16° 50'	50,51	4CC
35	70	19	18	1	14	1	16° 49' 30''	57,138	4DB
40	75	19	18	1	14	1	18° 10' 30''	61,526	4CB
45	85	21	20	2	15,5	2	16° 55' 30''	70,252	4DB
50	84	22	22	3,5	17,5	1,5	16° 15'	69,283	4CC
50	90	21	20	2	15,5	2	18° 04' 30''	74,87	4DB
50	105	37	36	3	29	2,5	18°	80,243	4FD
50	105	41	40	4	34	2,5	16° 41'	78,494	4FE
55	95	21	20	2	15,5	2	16° 33'	80,79	4CB
55	115	44	42	5	37	2,5	16° 15'	86,683	4FE

[a] Maximum chamfer dimensions are given in ISO 582.

[b] Dimension series deviates from the rules in Clause 5.

Table 6 *(continued)*

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
60	95	23	23	1,5	17,5	1,5	16°	80,634	4CC
60	100	21	20	2	15,5	2	17° 30'	85,256	4CB
60	125	48	46	5	40	2,5	16° 15'	94,207	4FE
65	100	23	23	1,5	17,5	1,5	17°	85,567	4CC
65	105	21	20	2	15,5	2	18° 27'	89,709	4CB
65	105	24	23	3	18,5	1	16° 50'	88,892	4CD[b]
70	110	21	20	2	15,5	2	17° 05'	95,533	4CB
70	110	25	25	1,5	19	1,5	16° 10'	93,633	4CC
70	110	26	25	1	20,5	2,5	18°	91,539	4CD[b]
70	115	29	29	3	23	2,5	16°	96,479	4DC[b]
70	140	52	51	5	43	3	16° 34' 30''	106,644	4FE
75	115	21	20	2	15,5	2	17° 55'	100,019	4CB
75	115	25	25	1,5	19	1,5	17°	98,358	4CC
75	120	31	29,5	3	25	2,5	16° 30'	99,926	4CD
75	130	27,25	25	2	22	1,5	16° 10' 20''	110,408	4DB
75	130	33,25	31	2	27	1,5	16° 10' 20''	108,932	4DC
80	125	24	22,5	2	17,5	2	16° 46'	108,745	4CB
80	150	52	51	5	43	3	16° 33'	116,58	4FE
85	130	24	22,5	2	17,5	2	17° 30'	113,315	4CB
85	130	29	29	1,5	22	1,5	16° 25'	111,788	4CC
85	130	30	29	3	24	2,5	16° 30'	110,063	4CD
90	135	24	22,5	2	17,5	2	18° 14'	117,895	4CB
90	145	35	34	3	27	2,5	16° 30'	122,392	4DC
90	165	55	54	5	45	3	16° 15'	130,224	4FE
95	140	24	22,5	2	17,5	2	16° 51'	123,776	4CB
95	145	32	32	2	24	1,5	16° 25'	124,927	4CC
95	150	35	34	3	27	2,5	16° 25'	125,409	4DC
95	170	55	54	5	45	3	16° 47'	134,331	4FE
100	145	24	22,5	3	17,5	3	17° 30'	128,389	4CB
100	150	32	32	2	24	1,5	17°	129,269	4CC
100	155	36	35	3	28	2,5	17° 30'	130,754	4DC
100	160	41	40	3	32	2,5	17° 25'	133,441	4DD
100	175	55	54	6	45	3	16°	140,655	4FE

[a]   Maximum chamfer dimensions are given in ISO 582.

[b]   Dimension series deviates from the rules in Clause 5.

Table 6 *(continued)*

d	D	T	B	$r_{\text{s min}}$ᵃ	C	$r_{\text{1s min}}$ᵃ	α	E	Dimension series
105	150	24	22,5	3	17,5	3	18° 09'	132,982	4CB
105	160	35	35	2,5	26	2	16° 30'	137,685	4DC
105	180	55	54	6	45	3	16° 30'	144,884	4EE
110	160	27	25,5	3	19,5	3	16° 24'	142,292	4CB
110	170	38	38	2,5	29	2	16°	146,29	4DC
115	165	28	27	3,3	21	3	17°	142,481	4CC
120	170	27	25	3	19,5	3	17° 30'	151,495	4CB
120	180	38	38	2,5	29	2	17°	155,239	4DC
120	200	58	57	6	47	3	16° 42'	162,59	4FE
120	215	43,5	40	3	34	2,5	16° 10' 20''	181,257	4FB
120	215	61,5	58	3	50	2,5	16° 10' 20''	174,825	4FD
130	185	29	27	3	21	3	17° 30'	165,002	4CB
130	200	45	45	2,5	34	2	16° 10'	172,043	4EC
130	230	43,75	40	4	34	3	16° 10' 20''	196,42	4FB
130	230	67,75	64	4	54	3	16° 10' 20''	187,088	4FD
140	195	29	27	3	21	3	18° 32'	174,512	4CB
140	210	45	45	2,5	34	2	17°	180,72	4DC
140	220	58	57	6	47	4	16° 39' 30''	182,746	4EE
140	250	45,75	42	4	36	3	16° 10' 20''	212,27	4FB
140	250	71,75	68	4	58	3	16° 10' 20''	204,046	4FD
150	210	32	30	3	23	3	17° 04'	188,281	4DB
150	225	48	48	3	36	2,5	17°	193,674	4EC
150	270	49	45	4	38	3	16° 10' 20''	227,408	4GB
150	270	77	73	4	60	3	16° 10' 20''	219,157	4GD
160	220	32	30	3	23	3	17° 57' 30''	197,895	4DB
160	240	46	44,5	3	37	2,5	16° 15'	209,765	4EBᵇ
160	240	51	51	3	38	2,5	17°	207,209	4EC
160	245	61	59	6	50	4	16° 37'	205,576	4EE
160	290	52	48	4	40	3	16° 10' 20''	244,958	4GB
160	290	84	80	4	67	3	16° 10' 20''	234,942	4GD
170	230	32	30	3	23	3	17° 06'	208,314	4DB
170	240	46	44,5	3	37	2,5	16° 15'	209,765	4DD

ᵃ Maximum chamfer dimensions are given in ISO 582.

ᵇ Dimension series deviates from the rules in [Clause 5](#).

Table 6 *(continued)*

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
170	260	57	57	3	43	2,5	16° 30'	223,031	4EC
170	310	57	52	5	43	4	16° 10' 20''	262,483	4GB
170	310	91	86	5	71	4	16° 10' 20''	251,873	4GD
180	240	32	30	3	23	3	17° 54'	217,699	4DB
180	250	45	45	2,5	34	2	17° 45'	218,571	4DC
180	250	47	45	3	37	2,5	17° 45'	218,569	4DD
180	265	61	59	6	50	4	16° 35'	225,723	4EE
180	320	57	52	5	43	4	16° 41' 57''	270,928	4GB
180	320	91	86	5	71	4	16° 41' 57''	259,938	4GD
190	260	37	34	3	27	3	16° 46'	234,451	4DB
190	260	45	45	2,5	34	2	17° 39'	228,578	4DC
190	260	46	44	3	36,5	2,5	17° 39'	228,577	4DD
190	290	64	64	3	48	2,5	16° 25'	249,853	4FD
190	340	60	55	5	46	4	16° 10' 20''	291,083	4GB
190	340	97	92	5	75	4	16° 10' 20''	279,024	4GD
200	270	37	34	3	27	3	17° 30'	244,35	4DB
200	290	64	62	6	52	4	16° 34'	248,588	4EE
200	310	70	70	3	53	2,5	16°	266,039	4FD
200	360	64	58	5	48	4	16° 10' 20''	307,196	4GB
220	290	37	34	3	27	3	18° 54'	263,12	4DB
220	340	76	76	4	57	3	16°	292,464	4FD
240	320	42	39	3	30	3	16° 56'	291,676	4EB
240	320	51	51	3	39	2,5	17°	286,952	4EC
240	360	76	76	4	57	3	17°	310,356	4FD
260	340	42	39	3	30	3	18° 04'	310,497	4DB
260	400	87	87	5	65	4	16° 10'	344,432	4FC
280	370	48	44	3	34	3	17° 30'	337,067	4EB
280	380	63,5	63,5	3	48	2,5	16° 05'	339,778	4EC
280	420	87	87	5	65	4	17°	361,811	4FC
300	400	52	49	3	37	3	17°	364,238	4EB
300	460	100	100	5	74	4	16° 10'	395,676	4GD
320	420	53	49	3	38	3	17° 55'	382,798	4EB

[a] Maximum chamfer dimensions are given in ISO 582.

[b] Dimension series deviates from the rules in Clause 5.

Table 6 *(continued)*

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
320	480	100	100	5	74	4	17°	415,64	4GD
340	460	76	76	4	57	3	16° 15'	412,043	4FD
360	480	76	76	4	57	3	17°	430,612	4FD

[a] Maximum chamfer dimensions are given in ISO 582.

[b] Dimension series deviates from the rules in Clause 5.

Table 7 — Contact angle series 5

Dimensions in millimetres

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
20	47	19,25	18	1	15	1	19°	33,708	5DD
25	52	19,25	18	1	15	1	21° 15'	37,555	5CD
28	58	20,25	19	1	16	1	20° 34'	42,436	5DD
30	62	21,25	20	1	17	1	20° 34'	46,389	5DC
30	72	28,75	27	1,5	23	1,5	20°	50,518	5FD
32	65	22	21,5	1	17	1	20°	48,523	5DC
32	75	29,75	28	1,5	23	1,5	20°	53,594	5FD
35	72	24,25	23	1,5	19	1,5	21° 10'	53,052	5DC
35	80	32,75	31	2	25	1,5	20°	57,011	5FE
40	80	24,75	23	1,5	19	1,5	20°	61,438	5DC
40	80	27	26,5	4	21,5	2	20° 43' 30''	58,963	5DD
40	90	35,25	33	2	27	1,5	20°	63,708	5FD
45	85	24,75	23	1,5	19	1,5	21° 35'	66,138	5DC
45	90	32	31	4	26	2	20°	66,466	5ED
45	100	38,25	36	2	30	1,5	20°	71,639	5FD
50	90	24,75	23	1,5	18	1,5	21° 20'	72,169	5DC
50	100	36	34,5	4	29	2	19° 27' 30''	74,391	5ED
50	110	42,25	40	2,5	33	2	20°	78,582	5FD
55	100	30	28,5	4	24	2,5	20°	77,839	5DD
55	105	36	34,5	4	29	2,5	20° 32' 30''	78,283	5ED

[a] Maximum chamfer dimensions are given in ISO 582.

[b] Dimension series deviates from the rules in Clause 5.

Table 7 *(continued)*

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
55	120	45,5	43	2,5	35	2	20°	86,3	5FD
60	110	34	32	4	27	2,5	19° 30'	85,698	5DD[b]
60	115	39	38	4	31	2,5	19° 32'	87,309	5ED
60	130	48,5	46	3	37	2,5	20°	94,2	5FD
65	115	34	32	4	27	2,5	20° 30'	89,829	5DD
65	120	39	38	4	31	2,5	20° 28'	91,214	5ED
65	140	51	48	3	39	2,5	20°	102,319	5GD
70	125	37	34,5	4	30	2,5	19° 34'	98,1	5DD[b]
70	130	42	40	4	34	2,5	19° 11'	100,186	5ED
70	150	54	51	3	42	2,5	20°	110,219	5GD
75	130	37	34,5	4	30	2,5	20° 26'	102,199	5DD
75	135	42	40	5	34	2,5	20°	104,21	5ED
75	160	58	55	3	45	2,5	20°	117,465	5GD
80	135	37	34,5	4	30	2,5	19° 36'	108,128	5DD
80	140	42	40	5	34	3	20° 49'	108,199	5ED
80	170	61,5	58	3	48	2,5	20°	125,001	5GD
85	140	37	34,5	4	30	3	20° 24'	112,385	5DD
85	145	42	40	5	34	3	19° 16'	115,106	5ED
85	180	63,5	60	4	49	3	20°	132,736	5GD
90	145	37	34,5	4	30	3	19° 16'	118,567	5DD
90	150	42	40	5	34	3	20°	119,254	5ED[b]
95	150	37	34,5	4	30	3	20°	122,832	5DD
95	155	42	40	5	34	3	20° 44'	123,374	5ED[b]
100	155	37	34,5	5	30	3	20° 44'	127,221	5DD
100	160	42	40	5	34	3	19° 20'	130,033	5ED[b]
105	160	37	34,5	5	30	3	19° 40'	133,284	5DD

[a] Maximum chamfer dimensions are given in ISO 582.

[b] Dimension series deviates from the rules in Clause 5.

Table 8 — Contact angle series 7

Dimensions in millimetres

d	D	T	B	$r_{s\,min}$[a]	C	$r_{1s\,min}$[a]	α	E	Dimension series
25	62	18,25	17	1,5	13	1,5	28° 48' 39''	44,13	7FB
30	72	20,75	19	1,5	14	1,5	28° 48' 39''	51,771	7FB
35	80	22,75	21	2	15	1,5	28° 48' 39''	58,861	7FB
40	90	25,25	23	2	17	1,5	28° 48' 39''	66,984	7FB
45	95	29	26,5	2,5	20	2,5	30°	67,061	7FC
45	100	27,25	25	2	18	1,5	28° 48' 39''	75,107	7FB
50	105	32	29	3	22	3	30°	74,245	7FC
50	110	29,25	27	2,5	19	2	28° 48' 39''	82,747	7FB
55	115	34	31	3	23,5	3	30°	81,787	7FC
55	120	31,5	29	2,5	21	2	28° 48' 39''	89,563	7FB
60	125	37	33,5	3	26	3	28° 39'	89,849	7FC
60	130	33,5	31	3	22	2,5	28° 48' 39''	98,236	7FB
65	130	37	33,5	3	26	3	30°	93,445	7FC
65	140	36	33	3	23	2,5	28° 48' 39''	106,359	7GB
70	140	39	35,5	3	27	3	30°	101,717	7FC
70	150	38	35	3	25	2,5	28° 48' 39''	113,449	7GB
75	150	42	38	3	29	3	30°	108,847	7FC
75	160	40	37	3	26	2,5	28° 48' 39''	122,122	7GB
80	160	45	41	3	31	3	30°	115,93	7FC
80	170	42,5	39	3	27	2,5	28° 48' 39''	129,213	7GB
85	170	48	45	4	33	4	28° 04' 30''	125,628	7FC
85	180	44,5	41	4	28	3	28° 48' 39''	137,403	7GB
90	175	48	45	4	33	4	29° 02' 30''	129,385	7FC
90	190	46,5	43	4	30	3	28° 48' 39''	145,527	7GB
95	180	49	45	4	33	4	30°	133,033	7FC
95	200	49,5	45	4	32	3	28° 48' 39''	151,584	7GB

[a]   Maximum chamfer dimensions are given in ISO 582.

Table 8 *(continued)*

d	D	T	B	$r_{\text{s min}}$[a]	C	$r_{\text{1s min}}$[a]	α	E	Dimension series
100	190	52	47	4	35	4	30°	140,384	7FC
100	215	56,5	51	4	35	3	28° 48' 39''	162,739	7GB
105	200	54	49	4	37	4	30°	147,838	7FC
105	225	58	53	4	36	3	28° 48' 39''	170,724	7GB
110	210	57	51	4	39	4	28° 25'	157,271	7GC
110	240	63	57	4	38	3	28° 48' 39''	182,014	7GB
120	220	57	51	4	39	4	30°	164,848	7FC
120	260	68	62	4	42	3	28° 48' 39''	197,022	7GB
130	230	57	51	5	39	5	30°	175,117	7FC
130	280	72	66	5	44	4	28° 48' 39''	211,753	7GB
140	240	57	52	5	39	5	28° 37'	187,175	7FC
140	300	77	70	5	47	4	28° 48' 39''	227,999	7GB
150	250	57	52	5	39	5	30°	195,041	7FC
150	320	82	75	5	50	4	28° 48' 39''	244,244	7GB

[a] Maximum chamfer dimensions are given in ISO 582.

6.3 Double-row or matched pair of tapered roller bearings

Boundary dimensions for contact angle series 2, 3, 4 and 7 are given in Tables 9, 10, 11 and 12 respectively.

NOTE   The dimension series given in Tables 9 to 12 are identical to the corresponding single-row bearings in Tables 4 to 8, respectively.

Table 9 — Contact angle series 2

Dimensions in millimetres

d	D	B_1	C_2	$r_{\text{s min}}$[a]	α	Dimension series
20	45	39	32	1	12°	2DC
20	50	50	43	2	12° 30'	2ED
22	47	39	32	1	12° 35'	2CC
22	52	50	43	2	12° 14'	2ED
25	50	39	32	1,5	13° 30'	2CC
25	58	58	48	2	12° 30'	2EE
28	55	43	36	1,5	12° 10'	2CD

[a] Maximum chamfer dimensions are given in ISO 582.

[b] Dimension series deviates from the rules in Clause 5.

Table 9 *(continued)*

d	D	B_1	C_2	$r_{\text{s min}}$[a]	α	Dimension series
28	65	61	51	2	12° 45'	2ED
30	58	44	37	1,5	12° 50'	2CD
30	68	65	55	2	12° 28'	2EE
32	62	47	39	1,5	12° 30'	2CD
32	72	65	55	2	12° 41' 30"	2ED
35	68	51	42	2	12° 35'	2DD
35	78	73	61	2,5	12° 12'	2EE[b]
40	75	53	44	2	12° 07'	2CD
40	85	73	63	2,5	12° 55'	2EE[b]
45	80	53	44	2	13°	2CD
45	95	79	67	2,5	12° 09'	2ED[b]
50	85	53	44	2	13° 52'	2CD
50	100	79	67	2,5	12° 51'	2ED
55	85	41	33	2	12° 49'	2CC
55	95	60	49	2	12° 43' 30"	2CD
55	110	87	73	2,5	13°	2ED[b]
60	90	42	34	2	13° 38' 30"	2CC
60	100	60	49	2	13° 27'	2CD
60	115	88	74	2,5	12° 30'	2EE
65	100	50	41	2	12° 10' 30"	2CC
65	110	70	58	2	12° 27'	2DD
65	125	95	79	2,5	12°	2FD
70	105	50	41	2	12° 49' 30"	2CC
70	120	76	62	2	12° 22'	2DD
70	130	95	79	3	12° 31' 30"	2ED
75	115	56	46	2	12°	2CC
75	125	76	62	2,5	12° 55'	2DD
75	135	95	79	3	13° 03'	2ED
80	120	56	46	2	12° 33' 30"	2CC
80	130	76	62	2,5	13° 30'	2DD

[a]   Maximum chamfer dimensions are given in ISO 582.

[b]   Dimension series deviates from the rules in Clause 5.

Table 9 *(continued)*

d	D	B_1	C_2	$r_{s\,min}$[a]	α	Dimension series
80	145	104	88	3	12° 02'	2ED
85	125	58	48	2,5	13° 07' 30"	2CC
85	135	76	64	2,5	13° 02'	2DD
85	150	104	88	3	12° 30'	2ED
90	135	64	54	2,5	12° 01' 30"	2CC
90	140	76	64	2,5	12° 02' 30"	2CD
90	155	104	88	3	12° 17'	2ED
90	165	104	88	3	12°	2FC
95	140	64	54	2,5	12° 30'	2CC
95	145	76	64	2,5	12° 30'	2CD
95	160	104	88	3	12° 43'	2ED
100	145	64	54	2,5	12° 58' 30"	2DC[b]
100	150	76	64	2,5	12° 57' 30"	2CD
100	165	104	88	3	12°	2EE
105	155	74	62	2,5	12° 17' 30"	2CD
105	160	84	70	3	12° 17' 30"	2DD
105	170	104	88	3	12° 18' 30"	2EE
110	160	74	62	2,5	12° 42' 30"	2CD
110	165	84	70	3	12° 42' 30"	2DD
110	175	104	88	4	12° 41' 30"	2EE[b]
120	175	82	68	2,5	12° 08'	2DC[b]
120	180	92	76	3	12° 08' 30"	2DD
120	190	110	92	4	12° 09' 30"	2EE
130	185	82	68	3	12° 52'	2DC[b]
130	190	92	76	3	12° 51' 30"	2DD
130	200	110	92	4	12° 50' 30"	2DE[b]
140	200	88	72	3	12°	2DC
140	205	98	82	3	12°	2DD
140	215	116	98	4	12°	2ED
150	215	98	82	3	12° 37'	2DD
150	225	116	98	4	12° 35' 30"	2ED

[a] Maximum chamfer dimensions are given in ISO 582.

[b] Dimension series deviates from the rules in Clause 5.

Table 9 *(continued)*

d	D	B_1	C_2	$r_{\text{s min}}$[a]	α	Dimension series
160	225	98	82	3	13° 14' 30"	2DD
160	235	116	98	4	13° 11' 30"	2ED
170	235	98	82	3	12° 13' 30"	2DD
170	245	116	98	5	12° 14'	2ED[b]
180	240	88	72	3	12° 47'	2DC
180	245	98	82	3	12° 46' 30"	2DD
180	255	116	98	5	12° 46'	2ED[b]
190	255	92	76	3	12° 15'	2DC
190	260	104	86	4	12° 15'	2DD
190	270	124	104	5	12° 15' 30"	2ED
200	265	92	76	3	12° 45'	2DC
200	270	104	86	4	12° 45'	2DD
200	280	124	104	5	12° 44' 30"	2ED
220	285	92	76	4	12°	2DC
220	290	104	86	4	12°	2DD
220	300	124	104	5	12° 04' 30"	2ED
240	305	92	76	4	12° 53'	2DC
240	310	104	86	4	12° 52'	2DD
240	320	126	104	6	12° 55' 30"	2EE
260	325	92	76	4	13° 46'	2DC
260	330	104	86	4	13° 44' 30"	2DD
260	340	126	104	6	12° 07' 30"	2DE
280	360	126	104	6	12° 52' 30"	2DE
[a] Maximum chamfer dimensions are given in ISO 582.						
[b] Dimension series deviates from the rules in Clause 5.						

Table 10 — Contact angle series 3

Dimensions in millimetres

d	D	B_1	C_2	$r_{\text{s min}}$[a]	α	Dimension series
20	42	34	28	0,6	14°	3CC
22	44	34	27	0,6	14° 50'	3CC
40	68	44	35	1	14° 10'	3CD
[a] Maximum chamfer dimensions are given in ISO 582.						

Table 10 *(continued)*

d	D	B_1	C_2	$r_{s\,min}$[a]	α	Dimension series
45	75	46	37	1	14° 40'	3CC
50	80	46	37	1	15° 45'	3CC
55	90	52	41	1,5	15° 10'	3CC
65	135	112	94	5	15° 55' 30"	3FE
75	145	112	94	5	15° 57'	3FE
80	125	66	52	1,5	15° 45'	3CC
85	160	118	98	5	15° 43'	3FE
90	140	73	57	2	15° 45'	3CC
110	190	126	104	6	15° 48'	3FE
130	210	126	104	6	15° 50' 30"	3EE
150	235	132	110	6	15° 53'	3EE
170	255	132	110	6	15° 55'	3EE
180	280	142	110	3	15° 45'	3FD
190	280	140	116	6	15° 58' 30"	3EE

[a]   Maximum chamfer dimensions are given in ISO 582.

Table 11 — Contact angle series 4

Dimensions in millimetres

d	D	B_1	C_2	$r_{s\,min}$[a]	α	Dimension series
25	47	34	27	0,6	16°	4CC
28	52	37	29	1	16°	4CC
30	55	39	31	1	16°	4CC
32	58	39	31	1	16° 50'	4CC
35	62	41	33	1	16° 50'	4CC
50	105	88	74	4	16° 41'	4FE

[a]   Maximum chamfer dimensions are given in ISO 582.

Table 11 *(continued)*

d	D	B_1	C_2	$r_{s\,min}$[a]	α	Dimension series
55	115	95	81	5	16° 15'	4FE
60	95	52	41	1,5	16°	4CC
60	125	104	88	5	16° 15'	4FE
65	100	52	41	1,5	17°	4CC
70	110	57	45	1,5	16° 10'	4CC
70	140	112	94	5	16° 34' 30"	4FE
75	115	58	46	1,5	17°	4CC
80	150	112	94	5	16° 33'	4FE
85	130	67	53	1,5	16° 25'	4CC
90	165	120	100	5	16° 15'	4FE
95	145	73	57	2	16° 25'	4CC
95	170	120	100	5	16° 47'	4FE
100	150	73	57	2	17°	4CC
100	175	120	100	6	16°	4FE
105	160	80	62	2,5	16° 30'	4DC
105	180	120	100	6	16° 30'	4EE
110	170	86	68	2,5	16°	4DC
120	180	88	70	2,5	17°	4DC
120	200	126	104	6	16° 42'	4FE
130	200	102	80	2,5	16° 10'	4EC
140	210	104	82	2,5	17°	4DC
140	220	126	104	6	16° 39' 30"	4EE
150	225	110	86	3	17°	4EC
160	240	116	90	3	17°	4EC
160	245	132	110	6	16° 37'	4EE

[a]   Maximum chamfer dimensions are given in ISO 582.

Table 11 *(continued)*

d	D	B_1	C_2	$r_{s\,min}$[a]	α	**Dimension series**
170	260	128	100	3	16° 30'	4EC
180	265	132	110	6	16° 35'	4EE
190	290	142	110	3	16° 25'	4FD
200	290	140	116	6	16° 34'	4EE
200	310	154	120	3	16°	4FD
220	340	166	128	4	16°	4FD
240	360	166	128	4	17°	4FD
260	400	190	146	5	16° 10'	4FC
280	420	190	146	5	17°	4FC
300	460	220	168	5	16° 10'	4GD
320	480	220	168	5	17°	4GD
[a] Maximum chamfer dimensions are given in ISO 582.						

Table 12 — Contact angle series 7

Dimensions in millimetres

d	D	B_1	C_2	$r_{s\,min}$[a]	α	**Dimension series**
25	62	42	31,5	1,5	28° 48' 39"	7FB
30	72	47	33,5	1,5	28° 48' 39"	7FB
35	80	51	35,5	2	28° 48' 39"	7FB
40	90	56	39,5	2	28° 48' 39"	7FB
45	95	63	45	2,5	30°	7FC
45	100	60	41,5	2	28° 48' 39"	7FB
50	105	69	49	3	30°	7FC
50	110	64	43,5	2,5	28° 48' 39"	7FB
55	115	73	52	3	30°	7FC
55	120	70	49	2,5	28° 48' 39"	7FB
60	125	79	57	3	28° 39'	7FC
[a] Maximum chamfer dimensions are given in ISO 582.						

Table 12 *(continued)*

d	D	B_1	C_2	$r_{s\,min}$[a]	α	Dimension series
60	130	74	51	3	28° 48' 39"	7FB
65	130	79	57	3	30°	7FC
65	140	79	53	3	28° 48' 39"	7GB
70	140	83	59	3	30°	7FC
70	150	83	57	3	28° 48' 39"	7GB
75	150	89	63	3	30°	7FC
75	160	88	60	3	28° 48' 39"	7GB
80	160	95	67	3	30°	7FC
80	170	94	63	3	28° 48' 39"	7GB
85	170	102	72	4	28° 04' 30"	7FC
85	180	99	66	4	28° 48' 39"	7GB
90	175	102	72	4	29° 02' 30"	7FC
90	190	103	70	4	28° 48' 39"	7GB
95	180	104	72	4	30°	7FC
95	200	109	74	4	28° 48' 39"	7GB
100	190	110	76	4	30°	7FC
100	215	124	81	4	28° 48' 39"	7GB
105	200	114	80	4	30°	7FC
105	225	127	83	4	28° 48' 39"	7GB
110	210	120	84	4	28° 25'	7GC
110	240	137	87	4	28° 48' 39"	7GB
120	220	120	84	4	30°	7FC
120	260	148	96	4	28° 48' 39"	7GB
130	230	120	84	5	30°	7FC
130	280	156	100	5	28° 48' 39"	7GB
140	240	120	84	5	28° 37'	7FC
140	300	168	108	5	28° 48' 39"	7GB
150	250	120	84	5	30°	7FC
150	320	178	114	5	28° 48' 39"	7GB

[a] Maximum chamfer dimensions are given in ISO 582.

6.4   Single-row tapered roller bearings with flanged outer rings

Boundary dimensions for contact angle series 2, 3, 4 and 7 are given in Tables 13, 14, 15 and 16 respectively.

NOTE   Flange dimensions suitable for flanged outer rings not listed in Tables 13 to 16 are given in Annex A.

Table 13 — Contact angle series 2

Dimensions in millimetres

d	D	T	B	$r_{s\,min}$ a	C	D_1	C_1	α	E	Dimen-sion series
15	42	6,25	13	1	11	46	3	10° 45' 29''	33,272	2FB
17	40	5,25	12	1	11	44	3	12° 57' 10''	31,408	2DB
17	40	6,25	16	1	14	44	3	11° 45'	31,17	2DD
17	47	6,25	14	1	12	51	3	10° 45' 29''	37,42	2FB
17	47	8,25	19	1	16	51	4	10° 45' 29''	36,09	2FD
20	47	6,25	14	1	12	51	3	12° 57' 10''	37,304	2DB
20	47	7,25	18	1	15	51	3	12° 28'	35,81	2DD
20	52	6,75	15	1,5	13	57	3,5	11° 18' 36''	41,318	2FB
20	52	8,75	21	1,5	18	57	4,5	11° 18' 36''	39,518	2FD
25	52	6,75	18	1	16	57	3,5	13° 30'	41,331	2CD
25	62	7,25	17	1,5	15	67	4	11° 18' 36''	50,637	2FB
25	62	10,25	24	1,5	20	67	5	11° 18' 36''	48,637	2FD
30	62	10	25	1	19,5	67	4,5	12° 50'	49,524	2DE
30	72	8,75	19	1,5	16	77	4	11° 51' 35''	58,287	2FB
30	72	11,75	27	1,5	23	77	6	11° 51' 35''	55,767	2FD
32	65	10	26	1	20,5	70	4,5	13°	51,791	2DE
35	72	11	28	1,5	22	77	5	13° 15'	57,186	2DE
35	80	9,25	21	2	18	85	4,5	11° 51' 35''	65,769	2FB
35	80	13,75	31	2	25	85	6	11° 51' 35''	62,829	2FE
40	75	10	26	1,5	20,5	80	4,5	13° 20'	61,169	2CE
40	80	12	32	1,5	25	85	5	13° 25'	63,405	2DE
40	90	9,75	23	2	20	95	4,5	12° 57' 10''	72,703	2FB
40	90	14,25	33	2	27	95	6	12° 57' 10''	69,253	2FD
45	75	9,5	24	1	19	79	4,5	11° 05'	63,116	2CE
45	100	10,25	25	2	22	106	5	12° 57' 10''	81,78	2FB
45	100	15,25	36	2	30	106	7	12° 57' 10''	78,33	2FD

a   Maximum chamfer dimensions are given in ISO 582.

b   Dimension series deviates from the rules in Clause 5.

Table 13 *(continued)*

d	D	T	B	$r_{s\,min}$a	C	D_1	C_1	α	E	Dimension series
50	80	9,5	24	1	19	84	4,5	11° 55'	67,775	2CE
50	110	11,25	27	2,5	23	116	5	12° 57' 10''	90,633	2FB
50	110	17,25	40	2,5	33	116	8	12° 57' 10''	86,263	2FD
55	90	11	27	1,5	21	94	5	11° 45'	76,656	2CE
55	95	11,5	29	1,5	23,5	100	6	12° 35'	79,593	2DDb
55	120	12	29	2,5	25	127	5,5	12° 57' 10''	99,146	2FB
55	120	18,5	43	2,5	35	127	8	12° 57' 10''	94,316	2FD
60	95	11	27	1,5	21	99	5	12° 20'	80,422	2CE
60	130	13	31	3	26	137	5,5	12° 57' 10''	107,769	2FB
60	130	19,5	46	3	37	137	8	12° 57' 10''	102,939	2FD
65	100	11	27	1,5	21	104	5	13° 05'	85,257	2CE
65	140	14	33	3	28	147	6	12° 57' 10''	116,846	2GB
65	140	20	48	3	39	147	8	12° 57' 10''	111,786	2GD
70	110	10,5	31	1,5	25,5	116	5	10° 45'	95,021	2CE
70	150	15	35	3	30	158	7	12° 57' 10''	125,244	2GB
70	150	22	51	3	42	158	10	12° 57' 10''	119,724	2GD
75	115	10,5	31	1,5	25,5	121	5	11° 15'	99,4	2CE
75	160	16	37	3	31	168	7	12° 57' 10''	134,097	2GB
75	160	23	55	3	45	168	10	12° 57' 10''	127,887	2GD
80	125	12	36	1,5	29,5	131	5,5	10° 30'	107,75	2CE
80	170	16,5	39	3	33	179	7	12° 57' 10''	143,174	2GB
80	170	24,5	58	3	48	179	11	12° 57' 10''	136,504	2GD
85	130	12	36	1,5	29,5	136	5,5	11°	112,838	2CE
85	180	18,5	41	4	34	190	8	12° 57' 10''	150,433	2GB
85	180	25,5	60	4	49	190	11	12° 57' 10''	144,223	2GD
90	140	12,5	39	2	32,5	146	6	10° 10'	122,363	2CE
90	190	18,5	43	4	36	200	8	12° 57' 10''	159,061	2GB
90	190	25,5	64	4	53	200	11	12° 57' 10''	151,701	2GD
95	145	12,5	39	2	32,5	151	6	10° 30'	126,346	2CE
95	200	19,5	45	4	38	210	8	12° 57' 10''	165,861	2GB
95	200	27,5	67	4	55	210	11	12° 57' 10''	160,318	2GD

a   Maximum chamfer dimensions are given in ISO 582.

b   Dimension series deviates from the rules in Clause 5.

Table 13 (continued)

d	D	T	B	$r_{s\,min}$a	C	D_1	C_1	α	E	Dimen-sion series
100	150	12,5	39	2	32,5	156	6	10° 50'	130,323	2CE
100	215	21,5	47	4	39	225	9	12° 57' 10''	178,578	2GB
100	215	29,5	73	4	60	225	12	12° 57' 10''	171,65	2GD
105	160	16,5	43	2,5	34	168	7,5	10° 40'	139,304	2DE
105	225	22	49	4	41	236	9,5	12° 57' 10''	186,752	2GB
105	225	30,5	77	4	63	236	12	12° 57' 10''	179,359	2GD
110	170	18,5	47	2,5	37	178	8,5	10° 50'	146,265	2DE
110	240	22	50	4	42	251	9,5	12° 57' 10''	199,925	2GB
110	240	31,5	80	4	65	251	12	12° 57' 10''	192,071	2GD
120	180	18,5	48	2,5	38	188	8,5	11° 30'	154,777	2DE
120	260	24,5	55	4	46	272	11	12° 57' 10''	214,892	2GB
120	260	34,5	86	4	69	272	13	12° 57' 10''	207,039	2GD
130	200	21	55	2,5	43	208	9	12° 50'	172,017	2EE
140	210	21	56	2,5	44	218	9	13° 30'	180,353	2DE
150	225	23	59	3	46	233	10	13° 40'	194,26	2EE

a   Maximum chamfer dimensions are given in ISO 582.

b   Dimension series deviates from the rules in Clause 5.

Table 14 — Contact angle series 3

Dimensions in millimetres

d	D	T	B	$r_{s\,min}$a	C	D_1	C_1	α	E	Dimension series
20	42	6	15	0,6	12	46	3	14°	32,781	3CC
22	44	6,5	15	0,6	11,5	48	3	14° 50'	34,708	3CC
25	52	6,75	15	1	13	57	3,5	14° 02' 10''	41,135	3CC
30	62	6,75	16	1	14	67	3,5	14° 02' 10''	49,99	3DB
30	62	8,25	20	1	17	67	4	14° 02' 10''	48,982	3DC
32	65	6,75	17	1	15	70	3,5	14°	52,5	3DB
35	72	7,25	17	1,5	15	77	4	14° 02' 10''	58,844	3DB
35	72	9,75	23	1,5	19	77	4,5	14° 02' 10''	57,087	3DC

a   Maximum chamfer dimensions are given in ISO 582.

b   Dimension series deviates from the rules in Clause 5.