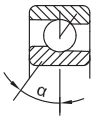


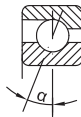
Angular contact ball bearings, single row

Single row angular contact bearings are manufactured in various constructive versions, with various contact angles, depending on the application. Bearings series 72B and 73B for general applications have a contact angle $\alpha = 40^\circ$. Bearings series 718, 719, 70 and 72 generally used for tool-holders, have

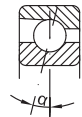
phenol resins (textolite) cages or machined brass cages. Those with bore diameters up to $d = 100$ mm are manufactured to tolerance classes P5, P4 and P2 and have a contact angle of $15^\circ(C)$ and $25^\circ(A)$ respectively.



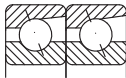
Series 72B, 73B
Contact angle $\alpha = 40^\circ$



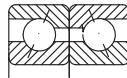
Series 70A, 72A
Contact angle $\alpha = 25^\circ$



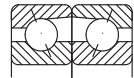
Series 70C, 72C
Contact angle $\alpha = 15^\circ$



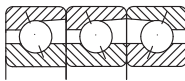
DT arrangement (Tandem)



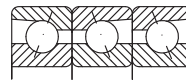
DB arrangement
(Back-to-back)



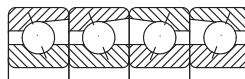
DF arrangement
(Face-to-face)



TFT arrangement



TBT arrangement



QFC arrangement



Suffixes

- A** - bearing with extended outer ring
- A** - bearing with contact angle $\alpha = 25^\circ$
- B** - bearing with extended outer ring
- B** - bearing with contact angle $\alpha = 40^\circ$
- BB** - bearing with $\alpha = 40^\circ$ and extended inner ring
- C** - bearing with contact angle $\alpha = 15^\circ$
- CA** - bearing with radial clearance smaller than normal
- CB** - bearing with normal radial clearance
- CC** - radial bearing with axial clearance larger than normal
- D** - two bearings set D - bearing with two-pieces inner ring
- DB** - two bearings set in back-to-back arrangement, (O)
- DF** - two bearings set in face-to-face arrangement, (X)
- DT** - two bearings set in tandem arrangement
- E** - bearing with contact angle $\alpha = 20^\circ$
- FA** - bearing with machined cage of steel or cast iron, guided in the outer ring
- FB** - bearing with machined cage of steel or cast iron, guided on the inner ring
- GA** - light preload, bearings series 72B, 73B
- GB** - moderate preload, bearings series 72B, 73B
- GC** - heavy preload, bearings series 72B, 73B
- L** - light preload, bearings series 70C, 70A, 72A
- M** - moderate preload, bearings series 70C, 70A, 72A
- M** - machined brass cage, ball guided
- MA** - machined brass cage, guided in the outer ring
- MB** - machined brass cage, guided in the inner ring
- O** - bearing set without axial clearance
- PO** - normal tolerance class
- P6** - tolerance class more accurate than normal
- P5** - tolerance class more accurate than P6
- P4** - tolerance class more accurate than P5
- P2** - tolerance class more accurate than P4
- Q** - four bearings set
- QFC** - tandem pairs in X arrangement
- S** - heavy preload, bearings series 70C, 70A, 72A
- SO** - bearings operating up to a temperature of + 150°C

- S1** - bearings operating up to a temperature of + 200°C
- T** - three bearings set
- T** - bearing set total width (T168, T200)
- TBT** - three bearings set in O arrangement, plus T
- TFT** - three bearings set in X arrangement, plus T
- TN** - polyamide cage
- V** - full complement bearing
- U** - bearings of universal design, with deviations of d and D and K_r , K_e in P2 class
- UA** - bearings with small axial clearance at DB and DF arrangements
- UL** - bearings with light preload at DB and DF arrangements
- UO** - bearings without small axial clearance at DB and DF arrangements
- UP** - tolerance class with deviations of d and D in P4 class and of K_r and K_e in P2 class.

Single row angular contact ball bearings can take only one direction axial loads. When being radially loaded, in bearing occurs an axially acting load which has to be compensated.

For this reason, a bearing or paired bearings are mounted on each shaft end.

Single row angular contact ball bearings with B suffix have a contact angle $\alpha = 40^\circ$ and are suitable in case of heavy loads.

These bearings are not dismountable and their use at relatively high speeds is allowed.

Pair mounting of bearings as shown in figures on page 133 is used when the load carrying capacity of a single bearing is inadequate (tandem arrangement), respectively when axial loads have to be taken in both directions (DB or DF arrangements).

In case of DT tandem arrangement, the contact lines are in parallel. Radial and axial loads are uniformly distributed on both bearings. The bearing pair can take axial loads in only one direction. Therefore, a third bearing should take axial loads in the opposite direction.

DB arrangement is considered to be a relatively stiff arrangement and can also take tilting moments.

The contact lines of DF arrangement converge

towards the bearing axis and form letter “X”. Axial loads are taken in the same way as in case of DB arrangement, but the arrangement is not so stiff and it is less suitable for taking tilting moments.

Universal design

Single row angular contact ball bearings of universal design are suitable for DB, DF and DT arrangements.

Bearings of universal design are manufactured to more accurate tolerance classes and can be matched if the mounting conditions UA, UO and UL are observed.

The values of clearance or preload are obtained when the shaft is manufactured to tolerance class J5 and the housing bore to tolerance class J6.

Dimensions

Main dimensions of bearings given in tables are in accordance with ISO 15.

Misalignment

In case of single row angular contact ball bearings the conditions regarding the permissible error of

alignment of the outer ring relative to the inner ring are as complex as for single row deep groove ball bearings.

When the bearings are paired in DB arrangement, angular misalignments of the outer ring in relation to the inner ring can only be accommodated between the balls and raceways by force, leading to a reduction in bearing life.

Tolerances

Single row angular contact ball bearings of series 72B and 73B, with a contact angle $\alpha = 40^\circ$ (B) are generally manufactured to the normal tolerance class.

At request, they also can be manufactured to normal tolerance classes P6 and P5.

The deviations of bore diameter, outside diameter and width of high accuracy single row angular contact ball bearings of universal design (UL) are given in table 1.

In case of single row angular contact ball bearings manufactured and delivered in sets of 2, 3 or 4 bearings, outside and bore diameter should be chosen considering the mean tolerance values, which are given on the package.

Deviations of main dimensions of high accuracy row angular contact bearings										Table 1
Bore										
d		$\Delta d_{mp}, \Delta D_{mp}$						ΔB_s		
over	up to	low	high	low	high	low	high	low	high	
(mm)		P4		UP		P2				
-	18	-3		-3		-2	0	-250	0	
18	30	-3,5	-1,5	-3		-2	0	-250	0	
30	50	-4	-1,5	-3		-2	0	-250	0	
50	80	-5	-2	-3,5	-1,5	-3		-250	0	
80	120	-5,5	-2			-3,5	-1,5	-380	0	

Contact angle

In case of single row angular contact ball bearings, the efforts between rings and rolling elements (contact points of rolling elements / outer or inner ring) are transmitted at an angle $\alpha (<90^\circ)$ to a plane perpendicular to the bearing axis.

The value of this angle depends on the magnitude of the raceway radius, rolling element diameter and radial clearance in bearing, when the curvature centres of the raceway in the outer or in the inner ring are in the same plane.



Axial clearance - preload

Axial clearance or preload can be obtained only when single row angular contact ball bearings is mounted in the assembly and depends on the location of the second bearing which assures the shaft axial guiding.

Single row angular contact ball bearings series 72B and 73B, paired mounted in DB and DF arrangements are manufactured with normal axial clearance CB, smaller than normal, CA, larger than normal, CC, or with light preload, GA, moderate preload GB, or heavy preload, GC, according to the values given in table 2.

Bore		Axial clearance						Preload											
d		CA		CB		CC		GA			GB				GC				
over	up to	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
mm	µm							N			µm				N				
-	10	4	12	14	22	22	30	-	-	-	-	-	-	-	-	-	-	-	-
10	18	5	13	15	23	24	32	4	-4	80	-2	-10	30	330	-8	-16	230	260	
18	30	7	15	18	26	32	40	4	-4	120	-2	-10	40	480	-8	-16	340	970	
30	50	9	17	22	30	40	48	4	-4	160	-2	-10	60	630	-8	-16	450	1280	
50	80	11	23	26	38	48	60	6	-6	380	-3	-15	140	1500	-12	-24	1080	3050	
80	120	14	26	32	44	55	67	6	-6	410	-3	-15	150	1600	-12	-24	1150	3250	
120	180	17	29	35	47	62	74	6	-6	540	-3	-15	200	2150	-12	-24	1500	4300	
180	250	21	37	45	61	74	90	8	-8	940	-4	-20	330	3700	-16	-32	2650	7500	
250	315	26	42	52	68	90	106	8	-8	1080	-4	-20	380	4250	-16	-32	3000	8600	

High accuracy single row angular contact ball bearings series 70C, 70A and 72A, with a contact angle $\alpha = 15^\circ$ (C) and $\alpha = 25^\circ$ (A), which are generally used for grinding stone holders, paired mounted in

DB and DF arrangement, are manufactured with an initial preload. It can be: light (L), moderate (M), heavy (S). The values of these preloads are given in table 3.

Bore		Axial preload											
		Series 70C			Series 72C			Series 70A			Series 72A		
d	Symbol	L	M	S	L	M	S	L	M	S	L	M	S
mm	-	N											
10	0	15	30	60	20	40	80	25	50	100	35	70	140
12	1	15	30	60	20	40	80	25	50	100	35	70	140
15	2	20	40	80	30	60	120	30	60	120	45	90	180
17	3	25	50	100	35	70	140	40	80	160	60	120	240
20	4	35	70	140	45	90	180	50	100	200	70	140	280
25	5	35	70	140	50	100	200	60	120	240	80	160	320
30	6	50	100	200	90	180	360	90	180	360	150	300	600
35	7	60	120	240	120	240	480	90	180	360	190	380	760
40	8	60	120	240	150	300	600	100	200	400	240	480	960
45	9	110	220	440	160	320	640	170	340	680	260	520	1040
50	10	110	220	440	170	340	680	180	360	720	260	520	1040
55	11	150	300	600	210	420	840	230	460	920	330	660	1320
60	12	150	300	600	250	500	1000	240	480	960	400	800	1600

Values of axial preload of bearings of series 70C, in DB and DF arrangements

Table 3 (continued)

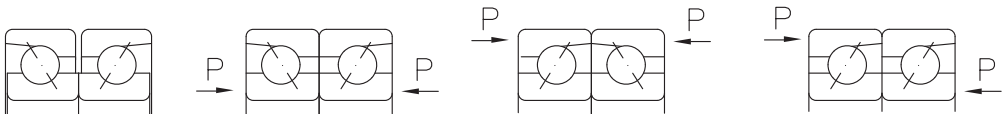
Bore		Axial preload											
		Series 70C			Series 72C			Series 70A			Series 72A		
d	Symbol	L	M	S	L	M	S	L	M	S	L	M	S
mm	-	N											
65	13	160	320	640	290	580	1160	240	480	960	450	900	1800
70	14	200	400	800	300	600	1200	300	600	1200	480	960	1920
75	15	200	400	800	310	620	1240	310	620	1240	500	1000	2000
80	16	240	480	960	370	740	1480	390	780	1560	580	1160	2320
85	17	250	500	1000	370	740	1480	400	800	1600	600	1200	2400
90	18	300	600	1200	480	960	1920	460	920	1840	750	1500	3000
95	19	310	620	1240	520	1040	2080	480	960	1920	850	1700	3400
100	20	310	620	1240	590	1180	2360	500	1000	2000	950	1900	3800
105	21	360	720	1440	650	1300	2600	560	1120	2240	1000	2000	4000
110	22	420	840	1680	670	1340	2680	650	1300	2600	1050	2100	4200
120	24	430	860	1720	750	1500	3000	690	1380	2760	1200	2400	4800
130	26	560	1120	2240	800	1600	3200	900	1800	3600	1250	2500	5000
140	28	570	1140	2280	-	-	-	900	1800	3600	-	-	-
150	30	650	1300	2600	-	-	-	1000	2000	4000	-	-	-
160	32	730	1460	2920	-	-	-	1150	2300	4600	-	-	-
170	34	800	1600	3200	-	-	-	1250	2500	5000	-	-	-
180	36	900	1800	3600	-	-	-	1450	2900	5800	-	-	-
190	38	950	1900	3800	-	-	-	1450	2900	5800	-	-	-

Designs of single row angular contact ball bearings with clearance or initial preload are given in the figures below:

Before mounting (preload)



After mounting (preload)



Cages

Single row angular contact ball bearings series 72B and 73B are generally fitted with pressed sheet cages.

At special request (high speeds, large sizes), bearing series 70C, 72C, 70A and 72A are fitted

with machined brass cages. Cages of glass fibre reinforced polyamide 6.6 are also used with good results if operating temperature doesn't exceed +120°C.

Cages design and some technical data are given in table 4.



Cage design and technical data

Table 4

Cage	Design		Application	Max. value D _n n	
	bearing	cage		oil	grease
mm	-	N			
Pressed sheet cage			<ul style="list-style-type: none"> - General application - Moderate speeds - Bearing series 72B, 73B 	600x10 ³	450x10 ³
Machined brass cage M, MA, MB			<ul style="list-style-type: none"> - General application - High speeds - Bearings 7231B-7238B, 7310B-7338B 	1100x10 ³	800x10 ³
Polyamide cage TN			<ul style="list-style-type: none"> - General application - Low friction moments - High speeds 	1100x10 ³	900x10 ³
Textolite cage T, TA, TB			<ul style="list-style-type: none"> - High accuracy bearing series 70C, 72C, 70A, 72A - High speeds - Low vibration level 	1200x10 ³	900x10 ³

Equivalent dynamic radial load

For single row angular contact ball bearings series 72B and 73B, single and in tandem arrangement the following equations are used:

$$P_r = F_r, \text{ kN}, \quad \text{when } F_a/F_r < 1,14,$$

$$P_r = 0,35 F_r + 0,57 F_a, \text{ kN}, \quad \text{when } F_a/F_r > 1,14$$

For bearings in DB or DF arrangement

$$P_r = F_r + 0,65 F_a, \text{ kN} \quad \text{when } F_a/F_r < 1,14$$

$$P_r = 0,57 F_r + 0,93 F_a, \text{ kN}, \quad \text{when } F_a/F_r > 1,14$$

In case of paired bearings, F_r and F_a are the loads acting upon the bearings pair.

As the load is transmitted from one raceway to the other under a certain angle to the bearings axis, the actual load will cause an axial load. This has to be considered when calculating the equivalent dynamic load, in case of two single bearings or tandem

arrangements. The equations needed for calculation are given in table 5, for various arrangements and loading versions.

These equations are available for bearings mounted without clearance and without preload (clearance equal to zero).

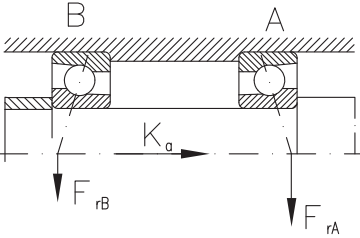
For single row angular contact ball bearings series 70C and 72C with a contact angle $\alpha = 15^\circ(\text{C})$, single or in DT arrangement, the following equations are available:

$$P_r = F_r, \text{ kN}, \quad \text{for } F_a/F_r < e,$$

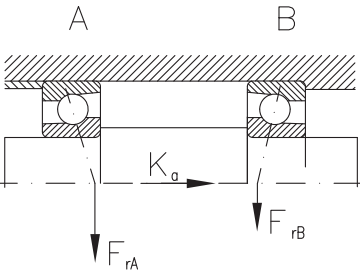
$$P_r = 0,44 F_r + Y F_a, \text{ kN}, \quad \text{for } F_a/F_r > e$$

The values of factor Y depend on the values of the ratio $f_0 i F_a / C_{Or}$ and are given in table 6. Factor f_0 can be found in diagram in page 140 as a function of dimensions series and bearing mean diameter. "i" represents the number of bearings or bearings pairs in a bearing join.

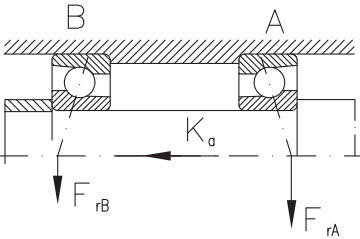
Back to back arrangement
DB



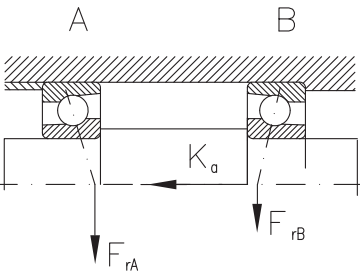
Face to face arrangement
DF



Back to back arrangement
DB



Face to face arrangement
DF



For bearings in DB and DF arrangements, the following equations are available:

$$P_r = F_r + Y_1 F_a, \text{ kN}, \quad \text{for } F_a/F_r < e,$$

$$P_r = 0,72 F_r + Y_2 F_a, \text{ kN}, \quad \text{for } F_a/F_r > e$$

The values of factors Y_1 and Y_2 depend on the ratio $f_0 i F_a / C_{0r}$ and are given in table 6 (f_0 from diagram below).

Determination of axial loads	
Loading version	Axial load
1a) $F_{rA} \geq F_{rB}$ $K_a \geq 0$	$F_{aA} = 1,14 F_{rA}$ $F_{aB} = F_{aA} + K_a$
1b) $F_{rA} < F_{rB}$ $K_a \geq 1,14 (F_{rB} - F_{rA})$	$F_{aA} = 1,14 F_{rA}$ $F_{aB} = F_{aA} + K_a$
1c) $F_{rA} < F_{rB}$ $K_a \leq 1,14 (F_{rB} - F_{rA})$	$F_{aB} = F_{aB} - K_a$ $F_{aA} = 1,14 F_{rB}$
2a) $F_{rA} \leq F_{rB}$ $K_a \geq 0$	$F_{aB} = F_{aB} + K_a$ $F_{aA} = 1,14 F_{rB}$
2b) $F_{rA} > F_{rB}$ $K_a \geq 1,14 (F_{rA} - F_{rB})$	$F_{aB} = F_{aB} + K_a$ $F_{aA} = 1,14 F_{rB}$
2c) $F_{rA} > F_{rB}$ $K_a < 1,14 (F_{rA} - F_{rB})$	$F_{aA} = 1,14 F_{rA}$ $F_{aB} = F_{aA} - K_a$



For single row angular contact ball bearings series 70A and 72A, with a contact angle $\alpha = 25^\circ$, single or in DT arrangement, the following equation are available:

$$P_r = F_r, \text{ kN, for } F_a/F_r < 0,68$$

$$P_r = 0,41 F_r + 0,87 F_a, \text{ kN, for } F_a/F_r > 0,68$$

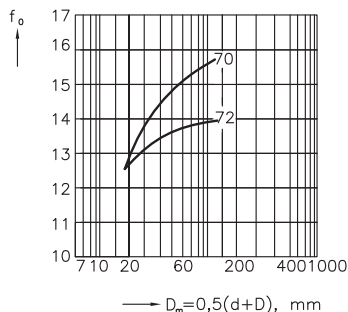
For bearings in DB and DF arrangement, the following equations are available:

$$P_r = F_r + Y_1 F_a, \text{ kN, for } F_a/F_r < e$$

$$P_r = 0,72 F_r + Y_2 F_a, \text{ kN, for } F_a/F_r > e$$

Values for Y_1 and Y_2 are given in table 6.

Values of factors e, Y, Y_1 and Y_2				
Table 6				
$\frac{f_0 i F_a}{C_{Or}}$	Single and DT		Arrangement DB or DF	
	e	Y	Y_1	Y_2
0,2	0,38	1,46	1,64	2,37
0,4	0,41	1,36	1,52	2,21
0,8	0,44	1,28	1,44	2,11
1,6	0,48	1,16	1,31	1,90
3	0,52	1,08	1,21	1,78
6	0,56	1	1,12	1,66



Equivalent static load

For single row angular contact ball bearings series 72B and 73B with a contact angle $\alpha = 40^\circ$, single and in DT arrangement, the following equation is available:

$$P_{Or} = 0,6 F_r + 0,26 F_a, \text{ kN}$$

If $P_{Or} < F$ then we consider $P_0 = F_r$

For bearings in DB and DT arrangement, the following equation is available:

$$P_{Or} = F_r + 0,52 F_a, \text{ kN}$$

For single row angular contact ball bearings series

70C and 72C, with a contact angle $\alpha = 15^\circ$, single and in DT arrangement, the following equation is available:

$$P_{Or} = 0,5 F_r + 0,46 F_a, \text{ kN}$$

For bearings in DB and DF arrangement, the following equation is available:

$$P_{Or} = 0,5 F_r + 0,92 F_a, \text{ kN}$$

For single row angular contact ball bearings series 70A and 72A with a contact angle $\alpha = 25^\circ$, single and in DT arrangement, the following equation is available:

$$P_{Or} = 0,5 F_r + 0,38 F_a, \text{ kN}$$

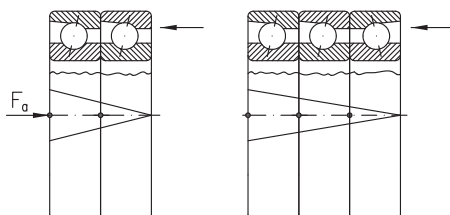
For bearings in DB and DF arrangement, the following equation is available:

$$P_{Or} = F_r + 0,76 F_a, \text{ kN}$$

Two "V" scratches are marked on the outside surface where the runout is maximum, i.e. where the outer ring thickness is maximum, so that the bearings of a set can be mounted in the manufacturing order. The place of maximum runout is marked on the chamfer between the inner ring bore and side face. Thus, the possible fit ovalnesses on the shaft can be compensated.

Every set is delivered as a unit, separately packed. In each unit, bearings are singly packed.

If distance rings are necessary to be mounted between bearings, they have not to be adjusted when being mounted. There is only one condition to be observed: the inner distance ring width should be equal to that of the outer ring, the side faces being parallel to each other. This can be easily done if both distance rings are simultaneously ground on a grinding and lapping machine. If bearings are mounted with distance rings, the mounting is also done observing the "V" marked as mentioned above. The cone vertex should be on the ring side opposite to that one on which the load acts (see next figure).



Basic dynamic load of paired bearings

Basic dynamic load given in bearings tables is valid for each single bearing. Basic dynamic load of a paired bearings set can be determined according to the specifications on page 20-21.

Basic static load of paired bearings

Basic static load of paired bearings can be similarly determined, multiplying the values of CO_r in the tables by 2, 3 and 4 respectively.

Bearing speed limit

Single row angular contact ball bearings are used at high speeds.

The values of speeds for bearings series 72B and 73B, normal tolerance class, without preload are given in this catalogue.

In case of preloaded bearings, for single mounted bearing and bearings in DB, DF or DT arrangements, speed should be multiplied by the coefficients in table 7.

For bearings series 70C, 72C, 70A and 72A, speeds are given for the tolerance class P4 and light preload.

In case of bearings with other values of preloads or arrangements of 3 or 4 bearing sets, the speeds of the bearing of basic design should be multiplied by the values of the coefficients in table 7.

Speed limit reduction factor Table 7				
Arrangement	Bearing preload			
	UA, UO	L	M	S
Single	1,0	1,0	0,90	0,80
Tandem, DT	0,90	0,90	0,80	0,65
Back-to-back, DB	0,80	0,80	0,70	0,55
Face-to-face, DF	0,80	0,75	0,60	0,40
Three bearings set	0,75	0,70	0,55	0,35
Four bearings set	0,70	0,65	0,45	0,25

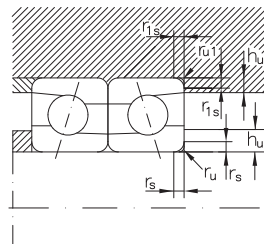
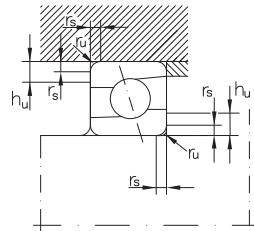
Abutment dimensions

For a proper location of bearing rings on the shaft and housing shoulder respectively, shaft (housing) maximum connection radius $r_{u \max}$ should be less than bearing minimum mounting chamfer $r_{1 \min}, r_{2 \min}$.

Shoulder height should also be properly sized in case of bearing maximum mounting chamfer.

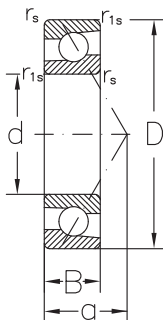
The values of the connection radii and support shoulder height are given in table 8.

Abutment dimensions Table 8			
r_{s1}, r_{1s} min	r_{s2}, r_{2s} max	h_u, h_{u1} min	
		Bearing series	
		718, 728, 719, 729, 70	72 73
mm			
0,3	0,3	1	1,2
0,6	0,6	1,6	2,1
1	1	2,3	2,6
1,1	1	3	3,5
1,5	1,5	3,5	4,5
2	2	4,4	5,5
2,1	2,1	5,1	6
3	2,5	6,2	7
4	3	7,3	8,5



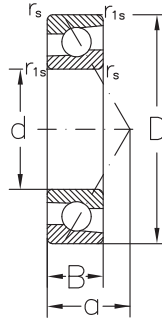


Angular contact ball bearing, single row



Dimensions					Basic radial load		Speed limit		Designation	Mass	
d	D	B	r _s min.	r _{1s} min.	a	dyn. C _r	stat. C _{0r}	grease			oil
mm					kN		min ⁻¹		-	Kg	
10	30	9	0,6	0,3	13	4,95	2,5	19000	28000	7200B	0,031
12	32	10	0,6	0,3	14	7,4	3,75	17000	24000	7201B	0,045
15	35	11	0,6	0,3	16	7,45	3,9	16000	22000	7202B	0,048
	35	11	0,6	0,3	16	7,45	3,9	16000	22000	7202BP6	0,048
	35	11	0,6	0,3	16	7,45	3,9	16000	22000	7202BP5	0,048
17	42	13	1	0,6	19	12,9	6,5	14000	19000	7302B	0,090
	40	12	0,6	0,6	18	11	6,1	14000	19000	7203B	0,070
	40	12	0,6	0,6	18	11	6,1	14000	19000	7203BP6	0,070
	40	12	0,6	0,6	18	11	6,1	14000	19000	7203BP5	0,070
	40	12	0,6	0,6	18	11	6,1	14000	19000	7203 BTN	0,064
	47	14	1	0,6	21	14,8	8,1	12000	17000	7303B	0,120
20	47	14	1	0,6	21	14,1	8,4	11000	16000	7204B	0,110
	47	14	1	0,6	21	14,1	8,4	11000	16000	7204BP6	0,110
	47	14	1	0,6	21	14,1	8,4	11000	16000	7204BP5	0,110
	52	15	1,1	0,6	23	17,3	9,7	10000	15000	7304B	0,150
	52	15	1,1	0,6	23	17,3	9,7	10000	15000	7304BP6	0,150
	52	15	1,1	0,6	23	17,3	9,7	10000	15000	7304 BEP	0,15
25	52	15	1	0,6	24	15,5	10,1	9500	14000	7205B	0,130
	52	15	1	0,6	24	15,5	10,1	9500	14000	7205BP6	0,130
	52	15	1	0,6	24	15,5	10,1	9500	14000	7205BP5	0,130
	62	17	1,1	0,6	27	24,4	14,6	8500	12000	7305B	0,250
	62	17	1,1	0,6	27	24,4	14,6	8500	12000	7305BP6	0,250
	62	17	1,1	0,6	27	24,4	14,6	8500	12000	7305AMA	0,250
30	62	17	1,1	0,6	27	24,4	14,6	8500	12000	7305 BEP	0,25
	62	16	1	0,6	27	20,5	13,6	8500	12000	7206B	0,210
	62	16	1	0,6	27	20,5	13,6	8500	12000	7206BP6	0,210
	62	16	1	0,6	27	20,5	13,6	8500	12000	7206BP5	0,210
	62	16	1	0,6	27	20,5	13,6	8500	12000	7206ATAP2	0,210
	72	19	1,1	0,6	31	29,3	19	7500	10000	7306B	0,370
	72	19	1,1	0,6	31	29,3	19	7500	10000	7306BP6	0,370
	72	19	1,1	0,6	31	29,3	19	7500	10000	7306BP5	0,370
	72	19	1,1	0,6	31	29,3	19	7500	10000	7306AMA	0,370
35	72	19	1,1	0,6	31	29,3	19	7500	10000	7306 BEP	0,37
	72	19	1,1	0,6	31	29,3	19	7500	10000	7306 BTN	0,341
	72	17	1,1	0,6	31	28,5	19,8	7500	10000	7207B	0,300
	72	17	1,1	0,6	31	28,5	19,8	7500	10000	7207BP5	0,300
	72	17	1,1	0,6	31	28,5	19,8	7500	10000	7207 BTN	0,282
	80	21	1,5	1	35	36,7	24,3	7000	9500	7307B	0,510
40	80	21	1,5	1	35	36,7	24,3	7000	9500	7307BP5	0,510
	80	18	1,1	0,6	34	32,1	23	6700	9000	7208B	0,390
	80	18	1,1	0,6	34	32,1	23	6700	9000	7208BP6	0,390
	80	18	1,1	0,6	34	32,1	23	6700	9000	7208BP5	0,390

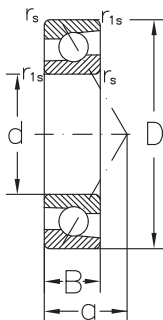
Angular contact ball bearing, single row



Dimensions						Basic radial load		Speed limit		Designation	Mass
d	D	B	r _s min.	r _{1s} min.	a	dyn. C _r	stat. C _{0r}	grease	oil		
mm						kN		min ⁻¹		-	Kg
40	90	23	1,5	1	39	44,8	30,3	6300	8500	7308B	0,670
	90	23	1,5	1	39	44,8	30,3	6300	8500	7308 BEP	0,67
	90	23	1,5	1	39	44,8	30,3	6300	8500	7308BP6	0,670
	90	23	1,5	1	39	44,8	30,3	6300	8500	7308BP5	0,670
45	85	19	1,1	0,6	37	36,1	26,2	6300	8500	7209B	0,440
	85	19	1,1	0,6	37	36,1	26,2	6300	8500	7209BP5	0,440
	100	25	1,1	0,6	37	36,1	26,2	6300	8500	7309 BTN	0,813
	100	25	1,5	1	43	58,3	40,1	5600	7500	7309B	0,900
	100	25	1,1	0,6	37	36,1	26,2	6300	8500	7309 BEP	0,900
	100	25	1,5	1	43	58,3	40,1	5600	7500	7309BP6	0,900
50	100	25	1,5	1	43	58,3	40,1	5600	7500	7309BP5	0,900
	90	20	1,1	0,6	39	37,4	28,6	5600	7500	7210B	0,490
	90	20	1,1	0,6	39	37,4	28,6	5600	7500	7210BP6	0,490
	90	20	1,1	0,6	39	37,4	28,6	5600	7500	7210BP5	0,490
	110	27	1,1	0,6	39	37,4	28,6	5600	7500	7310 BTN	1,05
	110	27	1,1	0,6	39	37,4	28,6	5600	7500	7310 BEP	1,15
	110	27	2	1	47	68,2	47,9	5000	6700	7310B	1,15
	110	27	2	1	47	68,2	47,9	5000	6700	7310BP6	1,15
55	110	27	2	1	47	68,2	47,9	5000	6700	7310BP5	1,15
	100	21	1,5	1	43	46,2	36,2	5300	7000	7211B	0,650
	100	21	1,5	1	43	46,2	36,2	5300	7000	7211 AA	0,64
	120	29	2	1	52	78,8	56,4	4500	6000	7311B	1,45
	120	29	2	1	52	78,8	56,4	4500	6000	7311 BTN	1,38
60	120	29	2	1	52	78,8	56,4	4500	6000	7311 BCBY	1,441
	110	22	1,5	1	47	56,3	44,7	4800	6300	7212B	0,840
	110	22	1,5	1	47	56,3	44,7	4800	6300	7212BP5	0,840
	110	22	1,5	1	47	56,3	44,7	4800	6300	7212 BTN	0,777
	130	31	2,1	1,1	56	90	65,5	4300	5600	7312B	1,85
	130	31	2,1	1,1	56	90	65,5	4300	5600	7312BP5	1,85
	130	31	2,1	1,1	56	90	65,5	4300	5600	7312 BECBP	1,85
65	130	31	2,1	1,1	56	90	65,5	4300	5600	7312 BTN	1,71
	120	23	1,5	1	50	63,6	52,5	4300	5600	7213B	1,05
	120	23	1,5	1	50	63,6	52,5	4300	5600	7213BP6	1,05
	120	23	1,5	1	50	63,6	52,5	4300	5600	7213BP5	1,05
	140	33	1,5	1	50	63,6	52,5	4300	5600	7313 BTN	2,12
	140	33	2,1	1,1	60	101	75,3	4000	5300	7313B	2,25
70	125	24	1,5	1	53	69,1	57,8	4300	5600	7214B	1,15
	125	24	1,5	1	53	69,1	57,8	4300	5600	7214 BTN	1,08
	150	35	2,1	1,1	64	114	86	3800	5000	7314B	2,75
	150	35	2,1	1,1	64	114	86	3800	5000	7314 BEP	2,75
	150	35	2,1	1,1	64	114	86	3800	5000	7314BP6	2,75
	150	35	2,1	1,1	64	114	86	3800	5000	7314BP5	2,75

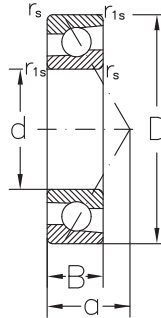


Angular contact ball bearing, single row



d	D	Dimensions				Basic radial load			Speed limit		Designation	Mass
		B	r _s min.	r _{1s} min.	a	dyn. C _r	stat. C _{0r}	grease	oil			
mm						kN			min ⁻¹		-	Kg
70	150	35	2,1	1,1	64	114	86	3800	5000	7314BTN	2,75	
	130	25	1,5	1	56	74,8	63,2	4000	5300	7215B	1,30	
75	130	25	1,5	1	56	74,8	63,2	4000	5300	7215BP6	1,30	
	130	25	1,5	1	56	74,8	63,2	4000	5300	7215BP5	1,30	
	130	25	1,5	1	56	74,8	63,2	4000	5300	7215 BTN	1,16	
	160	37	2,1	1,1	68	125	97,5	3400	4500	7315B	3,30	
	160	37	2,1	1,1	68	125	97,3	3400	4500	7315BMAP6	3,30	
	160	37	2,1	1,1	68	125	97,5	3400	4500	7315AMA	3,30	
	160	37	2,1	1,1	68	125	97,5	3400	4500	7315 BEGAM	3,30	
	160	37	2,1	1,1	68	125	97,5	3400	4500	7315 BTN	3,1	
80	140	26	2	1	59	80,5	69,3	3800	5000	7216B	1,55	
	140	26	2	1	59	80,5	69,3	3800	5000	7216 BTN	1,42	
	170	39	2,1	1,1	72	135	109	3200	4300	7316B	3,90	
	170	39	2,1	1,1	72	135	109	3200	4300	7316 BTN	3,66	
	170	39	2,1	1,1	72	135	109	3200	4300	7316BP6	3,903	
85	170	39	2,1	1,1	72	135	109	3200	4300	7316BMAP6	3,903	
	150	28	2	1	64	93,1	81,1	3400	4500	7217B	1,953	
	180	41	3	1,1	76	145	122	3000	4000	7317B	4,603	
	180	41	3	1,1	76	145	122	3000	4000	7317BP6	4,603	
	180	41	3	1,1	76	145	122	3000	4000	7317BMP6	4,603	
90	160	30	2	1	67	107	93,8	3200	4300	7218B	2,403	
	160	30	2	1	67	107	93,8	3200	4300	7218BMB	2,403	
	160	30	2	1	67	107	93,8	3200	4300	7218 BTN	2,21	
	190	43	3	1,1	80	156	135	2800	3800	7318B	5,403	
95	190	43	3	1,1	80	156	135	2800	3800	7318 BTN	5	
	170	32	2,1	1,1	71	116	101	3000	4000	7219B	2,903	
	170	32	2,1	1,1	71	116	101	3000	4000	7219 BTN	2,64	
	200	45	3	1,1	84	168	150	2600	3600	7319B	6,253	
100	180	34	2,1	1,1	76	129	116	2800	3800	7220B	3,453	
	180	34	2,1	1,1	76	129	116	2800	3800	7220BP6	3,453	
	180	34	2,1	1,1	76	129	116	2800	3800	7220BMA	3,453	
	180	34	2,1	1,1	76	129	116	2800	3800	7220BMAP6	3,453	
	180	34	2,1	1,1	76	129	116	2800	3800	7220BMAP4	3,453	
	180	34	2,1	1,1	76	129	116	2800	3800	7220BMB	3,453	
	180	34	2,1	1,1	76	129	116	2800	3800	7220 BM	3,6	
	215	47	3	1,1	90	190	178	2400	3400	7320B	7,753	
	215	47	3	1,1	90	190	178	2400	3400	7320BP6	7,753	
	215	47	3	1,1	90	190	178	2400	3400	7320 M	7,75	
110	200	38	2,1	1,1	84	153	145	2400	3400	7320BM	7,753	
	200	38	2,1	1,1	84	153	145	2400	3400	7222B	4,803	
	240	50	3	1,1	99	248	229	2000	3000	7222BMB	4,803	
										7322B	10,53	

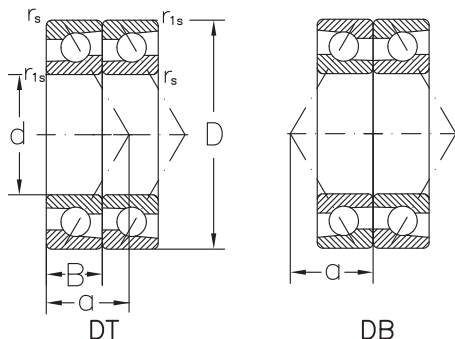
Angular contact ball bearing, single row



Dimensions						Basic radial load		Speed limit		Designation	Mass
d	D	B	r _s min.	r _{1s} min.	a	dyn. C _r	stat. C _{0r}	grease	oil		
mm						kN		min ⁻¹		-	Kg
110	240	50	3	1,1	99	248	229	2000	3000	7322BP5	10,53
	240	50	3	1,1	99	248	229	2000	3000	7322BM	10,53
140	250	42	3	1,1	103	191	210	1700	2400	7228B	8,803
	300	62	4	1,5	123	290	334	1700	2400	7328B	21,63
	300	62	4	1,5	123	290	334	1700	2400	7328BMBP5	21,63
150	190	24	1,1	0,6	35	60,5	79,2	2200	3000	72830CMA	3,363
	270	45	3	1,1	111	195	222	2000	2800	7230BM	11,63
	320	65	4	1,5	131	317	380	1600	2000	7330BM	26,53
	320	65	4	1,5	131	317	380	1600	2000	7330 M	26,53
	320	65	4	1,5	131	317	380	1600	2000	7330BMP5	26,53
160	220	28	2	1	58	110	134	2200	3000	71932AMAP5	3,263
180	250	33	2	2	33	131	162	2000	2800	71936AM	5,36
200	250	30	1,5	0,6	45	102	141	3000	5600	72840CMAF4	3,43

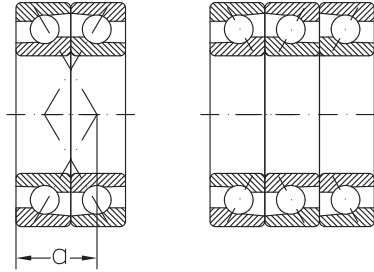


Angular contact ball bearing, single row, for paired and stack mounted



Dimensions						Basic radial load		Speed limit		Designation	Mass
d	D	B	r _s min.	r _{1s} min.	a	dyn. C _r	stat. C _{0r}	grease	oil		
mm						kN		min ⁻¹		-	Kg
15	35	11	0,6	0,3	16	12	7,8	14000	20000	7202BDT	0,096
	35	11	0,6	0,3	16	12	7,8	13000	18000	7202BDB	0,096
	35	11	0,6	0,3	16	12	7,8	14000	20000	7202BP6DT	0,096
	35	11	0,6	0,3	16	12	7,8	13000	18000	7202BP5DB	0,096
17	40	12	0,6	0,6	18	17,8	12,2	13000	17000	7203BDT	0,140
	40	12	0,6	0,6	18	17,8	12,2	11000	15000	7203BDB	0,140
	40	12	0,6	0,6	18	17,8	12,2	11000	15000	7203BDF	0,140
	40	12	0,6	0,6	18	17,8	12,2	11000	15000	7203BP6DB	0,140
20	40	12	0,6	0,6	18	17,8	12,2	11000	15000	7203BP5DB	0,140
	47	14	1	0,6	21	24	16,2	11000	15000	7303BDT	0,240
	47	14	1	0,6	21	22,8	16,8	10000	14000	7204BDT	0,220
	47	14	1	0,6	21	22,8	16,8	10000	14000	7204BDB	0,220
	47	14	1	0,6	21	22,8	16,8	9000	13000	7204BDF	0,220
	47	14	1	0,6	21	22,8	16,8	9000	13000	7204BP6DB	0,220
25	47	14	1	0,6	21	22,8	16,8	9000	13000	7204BP5DB	0,220
	52	15	1,1	0,6	23	28	19,4	9000	14000	7304BDT	0,303
	52	15	1,1	0,6	23	28	19,4	8000	12000	7304BDB	0,303
	52	15	1,1	0,6	23	28	19,4	8000	12000	7304BDF	0,303
	52	15	1	0,6	24	25,1	20,2	9000	13000	7205BDT	0,260
	52	15	1	0,6	24	25,1	20,2	9000	13000	7205BP5DT	0,260
	52	15	1	0,6	24	25,1	20,2	7500	11000	7205BDB	0,260
	52	15	1	0,6	24	25,1	20,2	7500	11000	7205BDF	0,260
	52	15	1	0,6	24	25,1	20,2	7500	11000	7205BP6DB	0,260
	52	15	1	0,6	24	25,1	20,2	7500	11000	7205BP5DB	0,260
30	52	15	1	0,6	24	33,5	30,3	7000	10000	7205BP5TFT	0,390
	62	17	1,1	0,6	27	39,5	29,2	7500	11000	7305BDT	0,500
	62	17	1,1	0,6	27	39,5	29,2	6700	9500	7305BDB	0,500
	62	17	1,1	0,6	27	39,5	29,2	6700	9500	7305BDF	0,500
	62	17	1,1	0,6	27	39,5	29,2	6700	9500	7305AMADF	0,500
	62	16	1	0,6	27	33,2	27,2	7500	11000	7206BDT	0,420
	62	16	1	0,6	27	33,2	27,2	7500	11000	7206ATAP2DT	0,420
	62	16	1	0,6	27	33,2	27,2	6700	9500	7206BDB	0,420
	62	16	1	0,6	27	33,2	27,2	6700	9500	7206BDF	0,420
	62	16	1	0,6	27	33,2	27,2	6700	9500	7206BP6DB	0,420
30	62	16	1	0,6	27	33,2	27,2	6700	9500	7206BP5DB	0,420
	62	16	1	0,6	27	33,2	27,2	6700	9500	7206BP5DF	0,420
	62	16	1	0,6	27	44,3	40,8	6000	8500	7206BP5TFT	0,630
	72	19	1,1	0,6	31	47,5	38	6700	9000	7306BDT	0,740
	72	19	1,1	0,6	31	47,5	38	6000	8000	7306BDB	0,740
	72	19	1,1	0,6	31	47,5	38	6000	8000	7306BDF	0,740
	72	19	1,1	0,6	31	63,3	57	5300	7000	7306BTFT	1,113
	72	19	1,1	0,6	31	77,4	76	5300	7000	7306BQFC	1,483

Angular contact ball bearing, single row, for paired and stack mounted



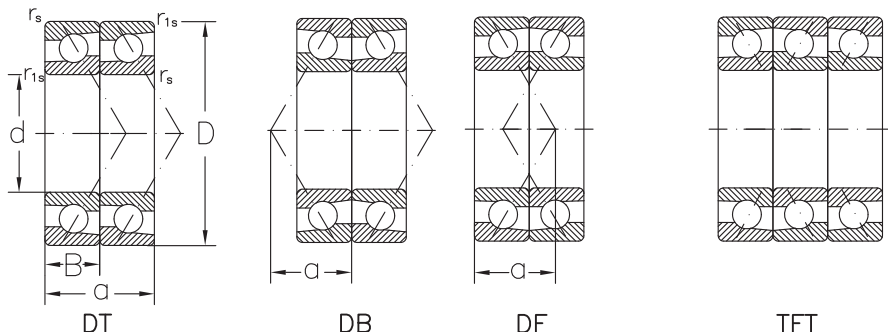
DF

TFT

d	Dimensions					Basic radial load		Speed limit		Designation	Mass	
	D	B	r _s min.	r _{is} min.	a	dyn. C _r	stat. C _{0r}	grease	oil			
mm						kN		min ⁻¹		-	Kg	
30	72	19	1,1	0,6	31	47,5	38	6700	9000	7306BP5DT	0,740	
	72	19	1,1	0,6	31	47,5	38	6700	9000	7306AMADT	0,740	
35	72	19	1,1	0,6	31	47,5	38	6700	8000	7306AMADF	0,740	
	72	17	1,1	0,6	31	46,2	39,6	6700	9000	7207BDT	0,600	
	72	17	1,1	0,6	31	46,2	39,6	6700	9000	7207BP5DT	0,600	
	72	17	1,1	0,6	31	46,2	39,6	6000	8000	7207BDB	0,600	
	72	17	1,1	0,6	31	46,2	39,6	6000	8000	7207BDF	0,600	
	72	17	1,1	0,6	31	46,2	39,6	6000	8000	7207BP5DB	0,600	
	72	17	1,1	0,6	31	61,6	59,4	5300	7000	7207BP5TBT	0,900	
	72	17	1,1	0,6	31	75,2	79,2	5300	7000	7207BP5QFC	1,203	
	80	21	1,5	1	35	59,5	48,6	6300	8500	7307BDT	1,023	
	80	21	1,5	1	35	59,5	48,6	5600	7500	7307BDB	1,023	
	80	21	1,5	1	35	59,5	48,6	5600	7500	7307BDF	1,023	
	80	21	1,5	1	35	59,5	48,6	5600	7500	7307BP6DB	1,023	
	40	80	18	1,1	0,6	34	52	46	6030	8100	7208BDB	0,780
		80	18	1,1	0,6	34	52	46	6000	8000	7208BDT	0,780
80		18	1,1	0,6	34	52	46	6000	8000	7208BP5DT	0,780	
80		18	1,1	0,6	34	52	46	5300	7000	7208BDF	0,780	
80		18	1,1	0,6	34	52	46	5300	7000	7208BP5DB	0,780	
90		23	1,5	1	39	72,6	60,6	5600	7500	7308BDT	1,343	
90		23	1,5	1	39	72,6	60,6	5000	6700	7308BDB	1,343	
90		23	1,5	1	39	72,6	60,6	5000	6700	7308BDF	1,343	
90		23	1,5	1	39	72,6	60,6	5000	6700	7308BP6DF	1,343	
90		23	1,5	1	39	72,6	60,6	5000	6700	7308BP5DB	1,343	
90		23	1,5	1	39	96,8	91,8	4500	6000	7308BTFT	0,670	
90		23	1,5	1	39	96,8	91,8	4500	6000	7308BP5TFT	2,013	
90		23	1,5	1	39	118	121	4500	6000	7308BQFC	2,683	
90		23	1,5	1	39	118	121	4500	6000	7308BP5QFC	2,683	
45	85	19	1,1	0,6	37	58,5	52,4	5600	7500	7209BDT	0,880	
	85	19	1,1	0,6	37	58,5	52,4	5000	6700	7209BDB	0,880	
	85	19	1,1	0,6	37	58,5	52,4	5000	6700	7209BDF	0,880	
	85	19	1,1	0,6	37	58,5	52,4	5000	6700	7209BP5DB	0,880	
	100	25	1,5	1	43	94,4	80,2	5000	6700	7309BDT	1,803	
	100	25	1,5	1	43	94,4	80,2	4500	6000	7309BDB	1,803	
	100	25	1,5	1	43	94,4	80,2	4480	6000	7309BDF	1,803	
	100	25	1,5	1	43	94,4	80,2	4500	6000	7309BP6DB	1,803	
50	100	25	1,5	1	43	94,4	80,2	4500	6000	7309BP6DF	1,803	
	90	20	1,1	0,6	39	60,6	57,2	5000	6700	7210BDT	0,980	
	90	20	1,1	0,6	39	60,6	57,2	5000	6700	7210BP5DT	0,980	
	90	20	1,1	0,6	39	60,6	57,2	4500	6000	7210BDF	0,980	
	90	20	1,1	0,6	39	60,6	57,2	4500	6000	7210BP5DB	0,980	
	110	27	2	1	47	111	95,8	4000	5300	7310BDB	2,303	

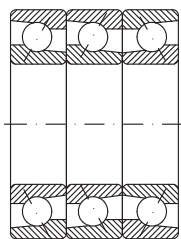


Angular contact ball bearing, single row, for paired and stack mounted

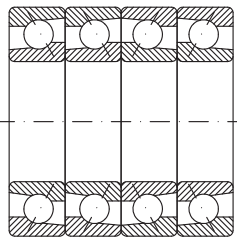


d	Dimensions					Basic radial load		Speed limit		Designation	Mass
	D	B	r _s min.	r _{1s} min.	a	dyn. C _r	stat. C _{0r}	grease	oil		
mm						kN		min ⁻¹		-	Kg
50	110	27	2	1	47	111	95,8	4000	5300	7310BDF	2.303
	110	27	2	1	47	205	144	3600	4800	7310BP5TFT	3.453
	110	27	2	1	47	273	192	3600	4800	7310BP5QFC	4.603
55	100	21	1,5	1	43	74,8	72,4	4800	6300	7211BDT	1.303
	100	21	1,5	1	43	74,8	72,4	4300	5600	7211BDB	1.303
	100	21	1,5	1	43	74,8	72,4	4300	5600	7211BDF	1.303
	120	29	2	1	51	128	113	4000	5300	7311BDT	2.903
	120	29	2	1	51	128	113	3600	4800	7311BDB	2.903
	120	29	2	1	52	128	113	3600	4800	7311BDF	2.903
60	110	22	1,5	1	47	91,2	89,4	4300	5600	7212BDT	1.683
	110	22	1,5	1	47	91,2	89,4	3800	5000	7212BDB	1.683
	110	22	1,5	1	47	91,2	89,4	3800	5000	7212BDF	1.683
	110	22	1,5	1	47	91,2	89,4	3800	5000	7212BP5DB	1.683
	130	31	2,1	1,1	55	146	131	3800	5000	7312BDT	3.703
	130	31	2,1	1,1	55	146	131	3400	4500	7312BDB	3.703
	130	31	2,1	1,1	55	146	131	3400	4500	7312BDF	3.703
65	120	23	1,5	1	50	103	105	3800	5000	7213BDT	2.103
	120	23	1,5	1,1	50	103	105	3800	5000	7213BDB	2.103
	120	23	1,5	1,1	50	103	105	3800	5000	7213BDF	2.103
	120	23	1,5	1	50	103	105	3400	4500	7213BP6DB	2.103
	140	33	2,1	1,1	60	164	151	3600	4800	7313BDT	4.503
	140	33	2,1	1,1	60	164	151	3200	4300	7313BDB	4.503
	140	33	2,1	1,1	60	164	151	3200	4300	7313BDF	4.503
	140	33	2,1	1,1	60	164	151	3200	4300	7313BP5DB	4.503
70	125	24	1,5	1	53	112	116	3800	5000	7214BDT	2.303
	125	24	1,5	1	53	112	116	3400	4500	7214BDB	2.303
	125	24	1,5	1	53	112	116	3400	4500	7214BDF	2.303
	150	35	2,1	1,1	64	185	172	3400	4500	7314BDT	5.503
	150	35	2,1	1,1	64	185	172	3400	4500	7314BP6DT	5.503
	150	35	2,1	1,1	64	185	172	3400	4500	7314BP5DT	5.503
	150	35	2,1	1,1	64	185	172	3000	4000	7314BDB	5.503
	150	35	2,1	1,1	64	185	172	3000	4000	7314BDF	5.503
75	130	25	1,5	1	56	121	126	3600	4300	7215BDT	2.603
	130	25	1,5	1	56	121	126	3200	4300	7215BDB	2.603
	130	25	1,5	1	56	121	126	3200	4300	7215BDF	2.603
	130	25	1,5	1	56	121	126	3200	4300	7215BP6DB	2.603
	130	25	1,5	1	56	121	126	3200	4300	7215BMAP6DB	2.603
	160	37	2,1	1,1	68	203	195	3200	4000	7315BDT	6.603
	160	37	2,1	1,1	68	203	195	2800	3600	7315BDB	6.603
	160	37	2,1	1,1	68	203	195	2800	3600	7315BDF	6.603

Angular contact ball bearing, single row, for paired and stack mounted



TBT

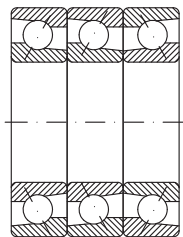


QFC

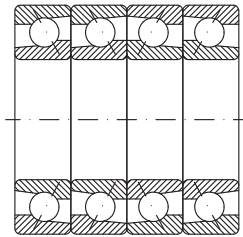
d	Dimensions					Basic radial load		Speed limit		Designation	Mass
	D	B	r _s min.	r _{1s} min.	a	dyn. C _r	stat. C _{0r}	grease	oil		
mm						kN		min ⁻¹		-	Kg
75	160	37	2,1	1,1	68	203	195	2800	3600	7315AMADF	6.603
	110	16	1	1	21	55,1	69,2	4000	5300	71916CTAP4DT	0,736
80	140	26	2	1	59	130	139	3200	4300	7216BDT	3.103
	140	26	2	1	59	130	139	2800	3800	7216BDB	3.103
	140	26	2	1	59	130	139	2800	3800	7216BDF	3.103
	170	39	2,1	1,1	72	219	218	2800	3800	7316BDT	7.803
	170	39	2,1	1,1	72	219	218	2800	3800	7316P6DT	7.803
	170	39	2,1	1,1	72	219	218	2600	3400	7316BDB	7.803
	170	39	2,1	1,1	72	219	218	2600	3400	7316BDF	7.803
	170	39	2,1	1,1	72	292	327	2200	3000	7316BTBT	11,73
	170	39	2,1	1,1	72	292	327	2200	3000	7316BMAP6TBT	11,73
85	150	28	2	1	64	151	162	3000	4000	7217BDT	3.903
	150	28	2	1	64	151	162	2800	3600	7217BDB	3.903
	150	28	2	1	64	151	162	2800	3600	7217BDF	3.903
	180	41	3	1,1	76	235	244	2800	3600	7317BDB	9.203
	180	41	3	1,1	76	235	244	2400	3200	7317BDF	9.203
	180	41	3	1,1	76	235	244	2800	3800	7218BDT	4.803
90	160	30	2	1	67	173	188	2600	3400	7218BDB	4.803
	160	30	2	1	67	173	188	2600	3400	7218BDF	4.803
	190	43	3	1,1	80	253	270	2600	3400	7318BDT	10,83
	190	43	3	1,1	80	253	270	2200	3000	7318BDB	10,83
	190	43	3	1,1	80	253	270	2200	3000	7318BDF	10,83
	190	43	3	1,1	80	337	405	2000	2600	7318BTBT	16,23
95	170	32	2,1	1,1	72	188	202	2800	3600	7219BDT	5.803
	170	32	2,1	1,1	72	188	202	2400	3200	7219BDB	5.803
	170	32	2,1	1,1	72	188	202	2400	3200	7219BDF	5.803
	200	45	3	1,1	84	272	300	2400	3200	7319BDT	12,53
	200	45	3	1,1	84	272	300	2000	2800	7319BDB	12,53
100	200	45	3	1,1	84	272	300	2000	2800	7319BDF	12,53
	180	34	2,1	1,1	76	208	232	2600	3400	7220BDT	6.903
	180	34	2,1	1,1	76	208	232	2200	3000	7220BDB	6.903
	180	34	2,1	1,1	76	208	232	2200	3000	7220BDF	6.903
	180	34	2,1	1,1	76	208	232	2200	3000	7220BMADB	6.903
	180	34	2,1	1,1	76	208	232	2200	3000	7220BMAP6DB	6.903
	180	34	2,1	1,1	76	208	232	2600	2800	7220BMAP4DT	6.903
	215	47	3	1,1	90	308	356	1900	2800	7320BDB	15,53
	215	47	3	1,1	90	308	356	1900	2800	7320BDF	15,53
	215	47	3	1,1	90	308	356	2200	3000	7320BDT	15,53
	215	47	3	1,1	90	308	356	2200	3000	7320P6DT	15,53
	110	215	47	3	1,1	90	308	356	2200	3000	7320BMDT
200		38	2,1	1,1	84	248	290	2200	3000	7222BDT	9.603



Angular contact ball bearing, single row, for paired and stack mounted



TBT



QFC

d	Dimensions					Basic radial load		Speed limit		Designation	Mass
	D	B	r _s min.	r _{1s} min.	a	dyn. C _r	stat. C _{0r}	grease	oil		
	mm					kN		min ⁻¹		-	Kg
110	200	38	2,1	1,1	84	248	290	1900	2800	7222BDB	9,603
	240	50	3	1,1	99	365	458	1800	2800	7322BDT	21,03
	240	50	3	1,1	99	365	458	1800	2800	7322BP5DT	21,03
	240	50	3	1,1	99	365	458	1600	2400	7322BMDF	21,03
	240	50	3	1,1	99	365	458	1600	2400	7322BDB	21,03
140	240	50	3	1,1	99	536	687	1400	2200	7322BTBT	31,53
	250	42	3	1,1	103	172	189	1400	1900	7228BDT	17,63
	300	62	4	1,5	123	470	668	1400	2200	7328BDT	43,23
	300	62	4	1,5	123	470	668	1400	2200	7328BMBP5DT	43,23
	300	62	4	1,5	123	470	668	1200	1900	7328BDB	43,23
150	270	45	3	1,1	111	156	444	2400	3800	7230BDB	23,23
	270	45	3	1,1	111	156	444	2400	3800	7230BMDB	23,23
	320	65	4	1,5	131	254	760	1400	1800	7330BMDF	53,03
	320	65	4	1,5	131	254	760	1400	1800	7330BMP5DT	53,03
160	220	28	2	1	58	176	268	1600	2400	71932AMAP5DB	6,523
180	250	33	2	2	33	210	324	1500	2200	71936AMDB	10,83
200	250	30	1,5	0,6	45	165	282	1400	2000	72840CMAP4DB	6,863
	250	30	1,5	0,6	45	220	423	1300	1800	72840CMAP4TBT	10,23