

## Precision Angular Contact Ball Bearing for Spindle

### 主轴用精密角接触球轴承

- 此类产品具备极高的旋转精度和尺寸精度，主要用于高转速主轴。产品外形尺寸为标准尺寸，优质的选材精密制造工艺使产品具备很高的性能和寿命。此类产品有成对安装和不成对安装两类，成对安装产品能在较大程度上节省安装时间和成本，并获得更好的精度和寿命。

Due to extremely high running and dimension precision, this kind of bearing is mainly used in high speed spindle. With standard dimension, good material quality and precise production technique, this kind of bearing normally has good capability and long lifetime. There are two assembly method available, pair-assembled and single assembled, between which the pair-assembled could greatly save assembly time and cost, and have higher precision as well as longer lifetime.



### 主轴轴承特点

主轴轴承是由外圈、内圈、球以及实体保持架等零件组合而成的单列角接触球轴承。属不可分离型。这类轴承可以是开式的，也可以是闭式密封的。

主轴轴承严格限定尺寸精度。因此它们特别适合于需要高精度和高速度的使用场合。主轴轴承尤其适用于机床主轴的回转部分。

角接触球轴承在内圈和外圈上有滚道，且内外圈在轴承轴向作相对位移。这意味着这种轴承圈的设计是用来承受复合载荷，即径向负荷和轴向负荷同时作用。

角接触球轴承的轴向载荷能力随着接触角的增大而增加。接触角 $\alpha$ 的定义为，径向平面上连接滚球和滚道接触点的线与一条同轴承轴垂直的线之间的角度，载荷沿着这个角度从一个滚道传到另一个滚道。

单列角接触球轴承只能承受作用于一个方向上的轴向载荷。在径向载荷下，在轴承中会产生作用于轴向的力，这个力必须抵消。因此，一个轴承通常相对第二个轴承作微小的调节。

单列角接触球轴承有一个高挡边和一个低挡边。有些轴承，有一个带两个高挡边的内圈，如同深沟球轴承一样。一个或两个轴承圈上的低挡边可以在轴承中装入较多的滚球，因此使轴承具有较高的载荷承受能力。这种轴承为不可分离式设计。

常用型号的接触角 $\alpha$ 为 $15^\circ$  (C)或 $25^\circ$  (E)，型号后缀为C.T.P4S或E.T.P4S，保持架是材料为酚醛树脂的实体保持架(T)，精度等级为P4S级。

单列角接触球轴承以两种形式生产

	任意配对的轴承组合
—	用于单列轴承配置的基本设计轴承（不可任意配对）。

大尺寸轴承是专为任意配对轴承生产的。

### 轴承的精度

轴承的精度，即尺寸精度和旋转精度，是由ISO规格规定的。尺寸精度是将轴承安装于轴或轴承箱时所要求的项目，它包括内径，外径，宽度，装配高，倒角尺寸及锥度公差或允许值。几何精度包括内径偏差，平均内径差，外径偏差，平均外径差，套圈端面平行差或厚度平行差(推力轴承)的允许值。旋转精度是规定旋转时振摆的，包括内圈及外圈径向摆动和轴向摆动，内圈侧摆及外圈垂直度公差范围。

精度等级比较							
标准	采用标准	精度等级					正常类型
中国标准	GB 307.1	P0	P6	P5	P4	P2	全部
国际标准	ISO 492	Class 6x	Class 6	Class 5	Class 4	Class 2	向心轴承
	ISO 199	Normal class	Class 6	Class 5	Class 4		推力球轴承
	ISO 1224			Class 5A	Class 4A		精密仪表轴承
德国标准	DIN 620	P0	P6	P5	P4	P2	全部

### 轴承内部游隙的选择标准

从理论上讲，轴承在正常运转时，稍带负的运转游隙，则轴承的寿命最大。但要保持这一最佳状态是非常困难的。因为随着使用条件的变化，轴承的负游隙也会相应增大，从而导致轴承寿命显著下降或产生发热。因此，一般将轴承的初期游隙定为稍稍大于零。

在通常情况下，即采取一般负荷的配合，且转速和温度正常时，只要选择相应的普通游隙，便可得到适当的运转游隙。

双列、双联向心推力球轴承的径向游隙											
公称轴承内径 d mm		单位 $\mu\text{m}$									
		C1		C2		CN		C3		C4	
超过	到	min	max	min	max	min	max	min	max	min	max
10	18	3	8	6	12	8	15	15	24	30	40
18	30	3	10	6	12	10	20	20	32	40	55
30	50	3	10	8	14	14	25	25	40	55	75
50	80	3	11	11	17	17	32	32	50	75	95
80	100	3	13	13	22	22	40	40	60	95	120
100	120	3	15	15	30	30	50	50	75	110	140
120	150	3	16	16	35	35	55	55	80	130	170
150	180	3	18	18	35	35	60	60	90	150	200
180	200	3	20	20	40	40	65	65	100	180	240

备注:上表须根据轴承接触角大小,按下表所示类别使用

接触角 符号	正常接触 角度	适用游隙组别				
		C1	C2			
C	$15^\circ$		C2	CN	C3	
A	$30^\circ$			CN	C3	
B	$40^\circ$				C3	C4

### 配对介绍

配对轴承是指用相同内径和外径的同类轴承组合在一起，以达到承受高负荷的需要。首先要确定相互配合的数量。

- D 二套 双联装
- T 三套 三联装
- Q 四套 四联装

在组配时，应按照一定的规则进行，用字母来表示轴承相互之间的排列方式。

- B 背对背排列
  - F 面对面排列
  - T 顺序排列
- (排列见附图)

**Characteristics of spindle bearings**

Spindle bearings are single row angular contact ball bearings comprising solid inner and outer rings and ball and cage assemblies with solid window cages. They cannot be dismantled. The bearings are available in both open and sealed versions.

Spindle bearings have restricted tolerances. They are particularly suitable for where requires very high guidance accuracy and speed capacity, especially for slewing part of the main spindle of machine tool.

Angular contact ball bearings have raceways in the inner and outer rings that are displaced with respect to each other in the direction of the bearing axis. This means that they are designed to accommodate combined loads, i.e. simultaneous radial and axial acting loads.

The axial load carrying capacity of angular contact ball bearings increases with the enlarging of contact angle. The contact angle  $\alpha$  is defined as the angle between the line joining contact point of the ball and the raceways in the radial plane, along which the load is transmitted from one raceway to another, and a line perpendicular to the bearing axis.

Single row angular contact ball bearings can accommodate axial loads acting in one direction only. Under radial loads a force acting in the axial direction is engendered in the bearing, and this force must be counteracted. Consequently the bearing is normally adjusted via a second bearing.

Single row angular contact ball bearings have one high and one low shoulder. Some bearings, particularly those of Diameter Series 8 and 9, have an inner ring with two high shoulders as a deep groove ball bearing. The low shoulder on one or both rings enables a large number of balls to be filled in the bearing, thus giving the bearings a relatively high load carrying capacity. They are of inseparable design.

The contact angle  $\alpha$  is 15° (C) or 25° (E), designation suffix C.T.P4S or E.T.P4S.F, for the most common sizes, the cage is a solid window type cage made of textile-laminated phenolic resin(T) and the tolerance class is P4S.

Single row angular contact ball bearings are produced in two versions

—	bearings for universal matching.
—	basic design bearings (not universally matchable) can only be used for arrangements with single bearings

**Bearing Tolerances**

Bearing tolerances of dimensional and running accuracy, are regulated as ISO standard. For dimensional accuracy, these standards prescribe the necessary tolerances when installing bearings on shafts or in housings, consisting of the acceptable values for bore diameter, outer diameter, assembled bearing width, the permit chamfer, and tapered bore deviation. The geometry accuracy includes average bore diameter variation, outer diameter variation, average outer diameter parallelism, as well as raceway width and height variation(for thrust bearings).

Running accuracy is defined as the allowable limits for bearing runout during operation, consisting of the acceptable values for inner and outer ring radial and axial runout, inner ring side runout, and outer diameter perpendicular deviation.

Comparison of tolerance classifications							
Standard	Applicable standard	Tolerance Class					Bearing Types
Chinese industrial standard(GB)	GB 307.1	P0	P6	P5	P4	P2	All type
International Organization for Standardization(ISO)	ISO 492	Class 6x	Class 6	Class 5	Class 4	Class 2	Radial bearings
	ISO 199	Normal class	Class 6	Class 5	Class 4		Thrust ball bearings
	ISO 1224			Class 5A	Class 4A		Precision instrument bearings
Deutsches Institut for Normung (DIN)	DIN 620	P0	P6	P5	P4	P2	All type

**Criteria for selecting bearing internal clearance**

A bearing's life is theoretically maximum when operating clearance is slightly negative at steady operation. In reality it however is difficult to constantly maintain this optimal condition.If the negative clearance becomes enlarged by fluctuant operating conditions, heat will be produced and bearing life will decrease dramatically. Under ordinary circumstances you should therefore select an initial internal clearance where the operating clearance is slightly larger than zero.

For ordinary operating conditions that use fitting for ordinary loads, running speed and operating temperature are ordinary,selecting normal clearance enables you to obtain the proper operating clearance.

Radial internal clearance for duplex angular contact ball bearings											Unit $\mu\text{m}$	
Nominal bore diameter d mm	C1		C2		CN		C3		C4			
	over	incl.	min	max	min	max	min	max	min	max	min	max
10	18		3	8	6	12	8	15	15	24	30	40
18	30		3	10	6	12	10	20	20	32	40	55
30	50		3	10	8	14	14	25	25	40	55	75
50	80		3	11	11	17	17	32	32	50	75	95
80	100		3	13	13	22	22	40	40	60	95	120
100	120		3	15	15	30	30	50	50	75	110	140
120	150		3	16	16	35	35	55	55	80	130	170
150	180		3	18	18	35	35	60	60	90	150	200
180	200		3	20	20	40	40	65	65	100	180	240

Note: The clearance group in the table is applied only to contact angles in the table below

Contact angle symbol	Nomial Contact angle	Applicable clearance group				
		C1	C2	CN	C3	C4
C	15°					
A	30°			CN	C3	
B	40°			CN	C3	C4

**Designation bearing sets**

Bearing sets consist of bearings with matched bore and outside diameters. The first letter refers to the number of bearings in a set.

D 2 bearings Duplex

T 3 bearings Triplex

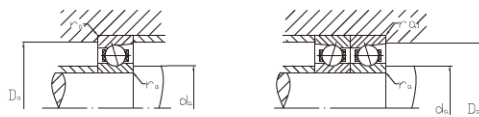
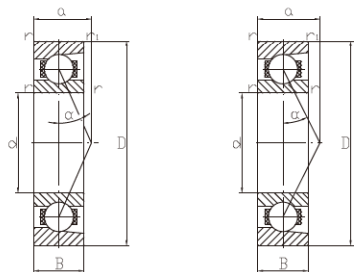
Q 4 bearings Quadroplex

Ready-to-mount bearing sets feature a defined order of bearings. The second (and sometimes third) letter refers to the arrangement of the bearings within the set:

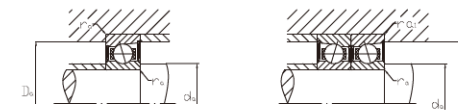
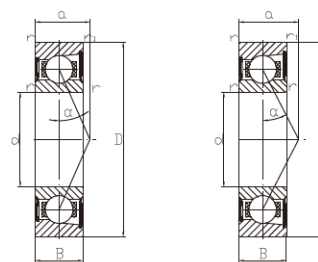
B back-to-back arrangement

F face-to-face arrangement

T tandern arrangement



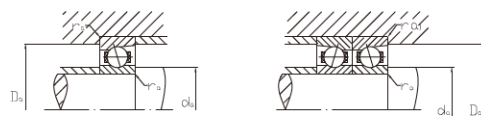
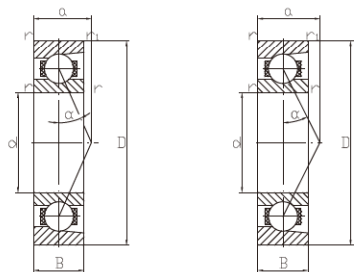
B719C, B70C, B72C  
contact angle  $\alpha = 15^\circ$



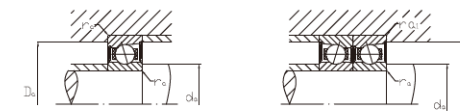
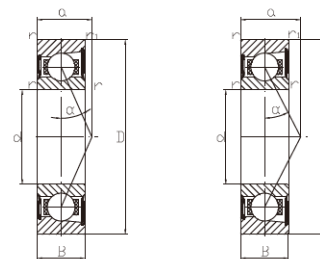
B719E, B70E, B72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(steel balls)

Shaft	Dimensions				Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions						
	d mm	D mm	B mm	r <sub>smin</sub> mm		r <sub>1smin</sub> mm	a	C <sub>r</sub> kN	C <sub>0r</sub> kN		Grease min <sup>-1</sup>	Oil Throwaway	da h12 mm	Da H12 mm	r <sub>amax</sub> mm	r <sub>1amax</sub> mm	
10	10	22	6	0.3	0.15	5	0.01	3.9	1.8	70000	110000	B71900C.T.P4S.UL	12	19.5	0.3	0.1	
	10	22	6	0.3	0.15	7	0.01	3.75	1.73	63000	95000	B71900E.T.P4S.UL	12	19.5	0.3	0.1	
	10	22	6	0.3	0.15	5	0.01	3.9	1.8	70000		B71900C.2RSD.T.P4S.UL	12	19.5	0.3	0.1	
	10	22	6	0.3	0.15	7	0.01	3.75	1.73	63000		B71900E.2RSD.T.P4S.UL	12	19.5	0.3	0.1	
	10	26	8	0.3	0.3	6	0.02	5.3	2.5	60000	90000	B7000C.T.P4S.UL	13	22.5	0.3	0.1	
	10	26	8	0.3	0.3	8	0.02	5.1	2.4	56000	85000	B7000E.T.P4S.UL	13	22.5	0.3	0.1	
	10	26	8	0.3	0.3	6	0.02	5.3	2.5	60000		B7000C.T.2RSD.T.P4S.UL	13	22.5	0.3	0.1	
	10	26	8	0.3	0.3	8	0.02	5.1	2.4	56000		B7000E.T.2RSD.T.P4S.UL	13	22.5	0.3	0.1	
10	30	9	0.6	0.6	0.6	7	0.03	6.95	3.35	53000	80000	B7200C.T.P4S.UL	14.5	26	0.6	0.6	
	30	9	0.6	0.6	0.6	9	0.03	6.8	3.25	48000	70000	B7200E.T.P4S.UL	14.5	26	0.6	0.6	
	30	9	0.6	0.6	0.6	7	0.03	6.95	3.35	53000		B7200C.2RSD.T.P4S.UL	14.5	26	0.6	0.6	
	30	9	0.6	0.6	0.6	9	0.03	6.8	3.25	48000		B7200E.2RSD.T.P4S.UL	14.5	26	0.6	0.6	
	12	12	24	6	0.3	0.15	5	0.01	4.5	2.28	60000	90000	B71901C.T.P4S.UL	14	21.5	0.3	0.1
		12	24	6	0.3	0.15	7	0.01	4.3	2.2	56000	85000	B71901E.T.P4S.UL	14	21.5	0.3	0.1
		12	24	6	0.3	0.15	5	0.01	4.5	2.28	60000		B71901C.2RSD.T.P4S.UL	14	21.5	0.3	0.1
		12	24	6	0.3	0.15	7	0.01	4.3	2.2	56000		B71901E.2RSD.T.P4S.UL	14	21.5	0.3	0.1
12		28	8	0.3	0.3	5	0.02	5.85	2.9	53000	80000	B7001C.T.P4S.UL	14.5	25.5	0.3	0.1	
12		28	8	0.3	0.3	6	0.02	5.6	2.8	50000	75000	B7001E.T.P4S.UL	14.5	25.5	0.3	0.1	
12		28	8	0.3	0.3	5	0.02	5.85	2.9	53000		B7001C.T.2RSD.T.P4S.UL	14.5	25.5	0.3	0.1	
12		28	8	0.3	0.3	6	0.02	5.6	2.8	50000		B7001E.T.2RSD.T.P4S.UL	14.5	25.5	0.3	0.1	
12	32	10	0.6	0.6	0.6	8	0.04	8	3.9	50000	75000	B7201C.T.P4S.UL	16	28	0.6	0.6	
	32	10	0.6	0.6	0.6	10	0.04	7.65	3.75	45000	67000	B7201E.T.P4S.UL	16	28	0.6	0.6	
	32	10	0.6	0.6	0.6	8	0.04	8	3.9	50000		B7201C.2RSD.T.P4S.UL	16	28	0.6	0.6	
	32	10	0.6	0.6	0.6	10	0.04	7.65	3.75	45000		B7201E.2RSD.T.P4S.UL	16	28	0.6	0.6	
	15	15	28	7	0.3	0.15	6	0.01	5	2.9	50000	75000	B71902C.T.P4S.UL	18	25.5	0.3	0.1
		15	28	7	0.3	0.15	9	0.01	4.8	2.75	45000	67000	B71902E.T.P4S.UL	18	25.5	0.3	0.1
		15	28	7	0.3	0.15	6	0.01	5	2.9	50000		B71902C.2RSD.T.P4S.UL	18	25.5	0.3	0.1
		15	28	7	0.3	0.15	9	0.01	4.8	2.75	45000		B71902E.2RSD.T.P4S.UL	18	25.5	0.3	0.1
15		32	9	0.3	0.3	8	0.03	6.2	3.4	48000	70000	B7002C.T.P4S.UL	18.5	28	0.3	0.1	
15		32	9	0.3	0.3	10	0.03	6	3.25	43000	63000	B7002E.T.P4S.UL	18.5	28	0.3	0.1	
15		32	9	0.3	0.3	8	0.03	6.2	3.4	48000		B7002C.T.2RSD.T.P4S.UL	18.5	28	0.3	0.1	



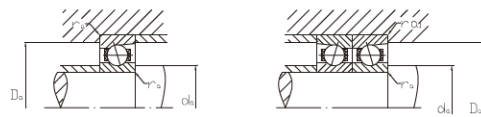
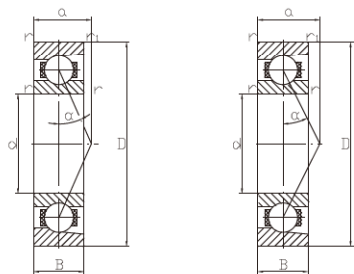
B719C, B70C, B72C  
contact angle  $\alpha = 15^\circ$



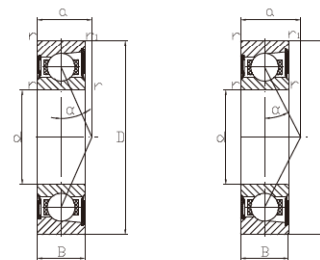
B719E, B70E, B72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(steel balls)

Shaft	Dimensions						Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions			
	d mm	D mm	B mm	r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a		C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm	r <sub>1amax</sub> mm
	15	32	9	0.3	0.3	10	0.03	6	3.25	43000		B7002E.T.2RSD.T.P4S.UL	18.5	28	0.3	0.1
	15	35	11	0.6	0.6	9	0.04	9.65	5	45000	67000	B7202C.T.P4S.UL	18.5	31	0.6	0.6
	15	35	11	0.6	0.6	11	0.04	9.3	4.8	40000	60000	B7202E.T.P4S.UL	18.5	31	0.6	0.6
	15	35	11	0.6	0.6	9	0.04	9.65	5	45000		B7202C.2RSD.T.P4S.UL	18.5	31	0.6	0.6
	15	35	11	0.6	0.6	11	0.04	9.3	4.8	40000		B7202E.2RSD.T.P4S.UL	18.5	31	0.6	0.6
17	17	30	7	0.3	0.15	7	0.02	5.3	3.15	48000	70000	B71903C.T.P4S.UL	19.5	27	0.3	0.1
	17	30	7	0.3	0.15	9	0.02	5	3	43000	63000	B71903E.T.P4S.UL	19.5	27	0.3	0.1
	17	30	7	0.3	0.15	7	0.02	5.3	3.15	48000		B71903C.2RSD.T.P4S.UL	19.5	27	0.3	0.1
	17	30	7	0.3	0.15	9	0.02	5	3	43000		B71903E.2RSD.T.P4S.UL	19.5	27	0.3	0.1
	17	35	10	0.3	0.3	9	0.04	8.65	4.9	43000	63000	B7003C.T.P4S.UL	20	31.5	0.3	0.1
	17	35	10	0.3	0.3	11	0.04	8.3	4.75	38000	56000	B7003E.T.P4S.UL	20	31.5	0.3	0.1
	17	35	10	0.3	0.3	9	0.04	8.65	4.9	43000		B7003C.T.2RSD.T.P4S.UL	20	31.5	0.3	0.1
	17	35	10	0.3	0.3	11	0.04	8.3	4.75	38000		B7003E.T.2RSD.T.P4S.UL	20	31.5	0.3	0.1
	17	40	12	0.6	0.6	10	0.07	10.8	5.85	38000	56000	B7203C.T.P4S.UL	21.5	35	0.6	0.6
	17	40	12	0.6	0.6	13	0.07	10.4	5.6	36000	53000	B7203E.T.P4S.UL	21.5	35	0.6	0.6
	17	40	12	0.6	0.6	10	0.07	10.8	5.85	38000		B7203C.2RSD.T.P4S.UL	21.5	35	0.6	0.6
	17	40	12	0.6	0.6	13	0.07	10.4	5.6	36000		B7203E.2RSD.T.P4S.UL	21.5	35	0.6	0.6
20	20	37	9	0.3	0.15	8	0.04	9.15	5.5	38000	56000	B71904C.T.P4S.UL	22.5	34	0.3	0.1
	20	37	9	0.3	0.15	11	0.04	8.8	5.3	36000	53000	B71904E.T.P4S.UL	22.5	34	0.3	0.1
	20	37	9	0.3	0.15	8	0.04	9.15	5.5	38000		B71904C.2RSD.T.P4S.UL	22.5	34	0.3	0.1
	20	37	9	0.3	0.15	11	0.04	8.8	5.3	36000		B71904E.2RSD.T.P4S.UL	22.5	34	0.3	0.1
	20	42	12	0.6	0.6	10	0.07	10.4	6	36000	53000	B7004C.T.P4S.UL	24.5	37	0.6	0.3
	20	42	12	0.6	0.6	13	0.07	10	5.7	32000	48000	B7004E.T.P4S.UL	24.5	37	0.6	0.3
	20	42	12	0.6	0.6	10	0.07	10.4	6	36000		B7004C.T.2RSD.T.P4S.UL	24.5	37	0.6	0.3
	20	42	12	0.6	0.6	13	0.07	10	5.7	32000		B7004E.T.2RSD.T.P4S.UL	24.5	37	0.6	0.3
	20	47	14	1	1	12	0.11	14.6	8.15	32000	48000	B7204C.T.P4S.UL	25.5	41.5	1	1
	20	47	14	1	1	15	0.11	14	7.8	30000	45000	B7204E.T.P4S.UL	25.5	41.5	1	1
	20	47	14	1	1	12	0.11	14.6	8.15	32000		B7204C.2RSD.T.P4S.UL	25.5	41.5	1	1
	20	47	14	1	1	15	0.11	14	7.8	30000		B7204E.2RSD.T.P4S.UL	25.5	41.5	1	1
25	25	42	9	0.3	0.15	9	0.04	10	6.7	32000	48000	B71905C.T.P4S.UL	27.5	39	0.3	0.1



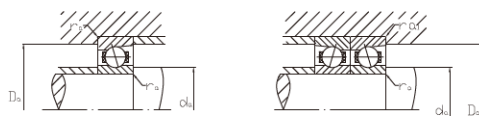
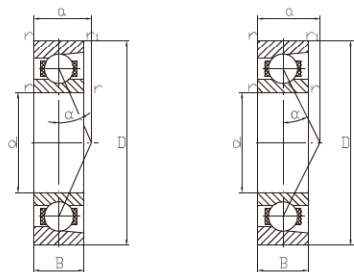
B719C, B70C, B72C  
contact angle  $\alpha = 15^\circ$



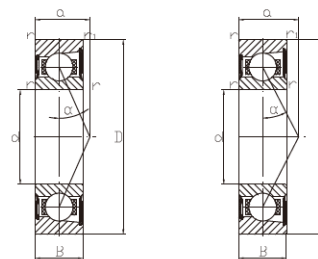
B719E, B70E, B72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(steel balls)

Shaft	Dimensions						Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions			
	d mm	D mm	B mm	r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a		C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm	r <sub>1amax</sub> mm
25	25	42	9	0.3	0.15	12	0.04	9.5	6.4	30000	45000	B71905E.T.P4S.UL	27.5	39	0.3	0.1
	25	42	9	0.3	0.15	9	0.04	10	6.7	32000		B71905C.2RSD.T.P4S.UL	27.5	39	0.3	0.1
	25	42	9	0.3	0.15	12	0.04	9.5	6.4	30000		B71905E.2RSD.T.P4S.UL	27.5	39	0.3	0.1
25	25	47	12	0.6	0.6	11	0.08	14.6	9.15	30000	45000	B7005C.T.P4S.UL	28.5	43	0.6	0.3
	25	47	12	0.6	0.6	14	0.08	13.7	8.65	28000		B7005E.T.P4S.UL	28.5	43	0.6	0.3
	25	47	12	0.6	0.6	11	0.08	14.6	9.15	30000		B7005C.T.2RSD.T.P4S.UL	28.5	43	0.6	0.3
	25	47	12	0.6	0.6	14	0.08	13.7	8.65	28000		B7005E.T.2RSD.T.P4S.UL	28.5	43	0.6	0.3
25	25	52	15	1	1	13	0.13	15.6	9.3	28000	43000	B7205C.T.P4S.UL	30.5	46.5	1	1
	25	52	15	1	1	17	0.13	15	9	26000		B7205E.T.P4S.UL	30.5	46.5	1	1
	25	52	15	1	1	13	0.13	15.6	9.3	28000		B7205C.2RSD.T.P4S.UL	30.5	46.5	1	1
	25	52	15	1	1	17	0.13	15	9	26000		B7205E.2RSD.T.P4S.UL	30.5	46.5	1	1
30	30	47	9	0.3	0.15	10	0.05	10.8	7.8	28000	43000	B71906C.T.P4S.UL	32.5	44	0.3	0.1
	30	47	9	0.3	0.15	14	0.05	10.2	7.35	26000		B71906E.T.P4S.UL	32.5	44	0.3	0.1
	30	47	9	0.3	0.15	10	0.05	10.8	7.8	28000		B71906C.2RSD.T.P4S.UL	32.5	44	0.3	0.1
	30	47	9	0.3	0.15	14	0.05	10.2	7.35	26000		B71906E.2RSD.T.P4S.UL	32.5	44	0.3	0.1
30	30	55	13	1	1	12	0.12	15	10.2	26000	40000	B7006C.T.P4S.UL	35.5	50	1	0.3
	30	55	13	1	1	17	0.12	14.3	9.8	24000		B7006E.T.P4S.UL	35.5	50	1	0.3
	30	55	13	1	1	12	0.12	15	10.2	26000		B7006C.T.2RSD.T.P4S.UL	35.5	50	1	0.3
	30	55	13	1	1	17	0.12	14.3	9.8	24000		B7006E.T.2RSD.T.P4S.UL	35.5	50	1	0.3
30	30	62	16	1	1	14	0.2	23.2	14.6	24000	38000	B7206C.T.P4S.UL	36.5	55.5	1	1
	30	62	16	1	1	19	0.2	22	14	22000		B7206E.T.P4S.UL	36.5	55.5	1	1
	30	62	16	1	1	14	0.2	23.2	14.6	24000		B7206C.2RSD.T.P4S.UL	36.5	55.5	1	1
	30	62	16	1	1	19	0.2	22	14	22000		B7206E.2RSD.T.P4S.UL	36.5	55.5	1	1
35	35	55	10	0.6	0.3	11	0.08	14.3	10.8	24000	38000	B71907C.T.P4S.UL	39	51.5	0.6	0.1
	35	55	10	0.6	0.3	16	0.08	13.4	10.4	22000		B71907E.T.P4S.UL	39	51.5	0.6	0.1
	35	55	10	0.6	0.3	11	0.08	14.3	10.8	24000		B71907C.2RSD.T.P4S.UL	39	51.5	0.6	0.1
	35	55	10	0.6	0.3	16	0.08	13.4	10.4	22000		B71907E.2RSD.T.P4S.UL	39	51.5	0.6	0.1
35	35	62	14	1	1	14	0.16	19	13.7	22000	36000	B7007C.T.P4S.UL	40.5	56	1	0.3
	35	62	14	1	1	18	0.16	18.3	12.9	20000		B7007E.T.P4S.UL	40.5	56	1	0.3
	35	62	14	1	1	14	0.16	19	13.7	22000		B7007C.T.2RSD.T.P4S.UL	40.5	56	1	0.3
	35	62	14	1	1	18	0.16	18.3	12.9	20000		B7007E.T.2RSD.T.P4S.UL	40.5	56	1	0.3



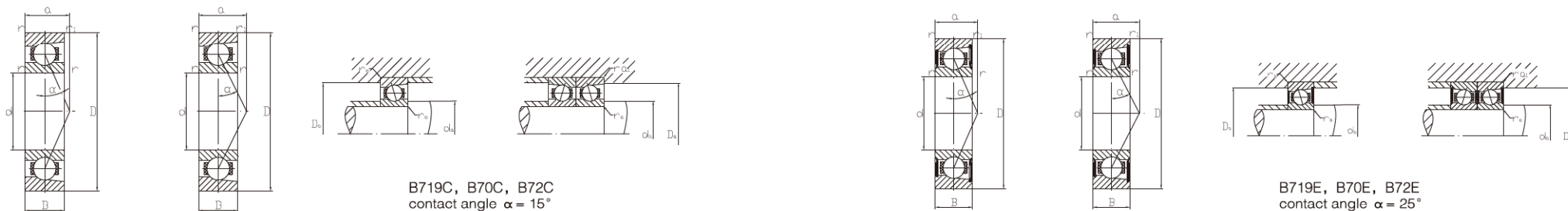
B719C, B70C, B72C  
contact angle  $\alpha = 15^\circ$



B719E, B70E, B72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(steel balls)

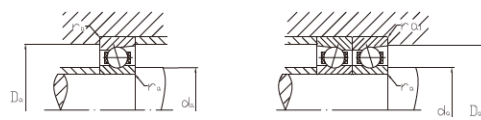
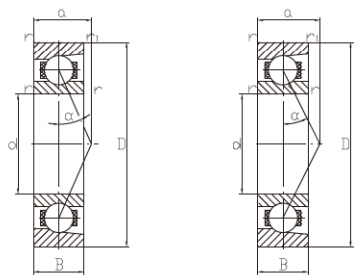
Shaft	Dimensions						Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions			
	d mm	D mm	B mm	r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a		C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm	r <sub>1amax</sub> mm
35	35	72	17	1.1	1.1	16	0.28	30.5	20	20000	34000	B7207C.T.P4S.UL	42	64.5	1	1
	35	72	17	1.1	1.1	21	0.28	29	19	19000	32000	B7207E.T.P4S.UL	42	64.5	1	1
	35	72	17	1.1	1.1	16	0.28	30.5	20	20000		B7207C.2RSD.T.P4S.UL	42	64.5	1	1
	35	72	17	1.1	1.1	21	0.28	29	19	19000		B7207E.2RSD.T.P4S.UL	42	64.5	1	1
40	40	62	12	0.6	0.3	13	0.11	17.6	13.7	22000	36000	B71908C.T.P4S.UL	43.5	58	0.6	0.1
	40	62	12	0.6	0.3	18	0.11	16.6	13.2	20000	34000	B71908E.T.P4S.UL	43.5	58	0.6	0.1
	40	62	12	0.6	0.3	13	0.11	17.6	13.7	22000		B71908C.2RSD.T.P4S.UL	43.5	58	0.6	0.1
	40	62	12	0.6	0.3	18	0.11	16.6	13.2	20000		B71908E.2RSD.T.P4S.UL	43.5	58	0.6	0.1
40	40	68	15	1	1	15	0.2	20.4	16	20000	34000	B7008C.T.P4S.UL	46	61.5	1	0.3
	40	68	15	1	1	20	0.2	19.6	15	19000	32000	B7008E.T.P4S.UL	46	61.5	1	0.3
	40	68	15	1	1	15	0.2	20.4	16	20000		B7008C.2RSD.T.P4S.UL	46	61.5	1	0.3
	40	68	15	1	1	20	0.2	19.6	15	19000		B7008E.2RSD.T.P4S.UL	46	61.5	1	0.3
40	40	80	18	1.1	1.1	17	0.38	32	22.4	18000	30000	B7208C.T.P4S.UL	48.5	71	1	1
	40	80	18	1.1	1.1	23	0.38	30.5	21.6	17000	28000	B7208E.T.P4S.UL	48.5	71	1	1
	40	80	18	1.1	1.1	17	0.38	32	22.4	18000		B7208C.2RSD.T.P4S.UL	48.5	71	1	1
	40	80	18	1.1	1.1	23	0.38	30.5	21.6	17000		B7208E.2RSD.T.P4S.UL	48.5	71	1	1
45	45	68	12	0.6	0.3	14	0.13	18.6	15.6	19000	32000	B71909C.T.P4S.UL	49	63.5	0.6	0.1
	45	68	12	0.6	0.3	19	0.13	17.6	15	18000	30000	B71909E.T.P4S.UL	49	63.5	0.6	0.1
	45	68	12	0.6	0.3	14	0.13	18.6	15.6	19000		B71909C.2RSD.T.P4S.UL	49	63.5	0.6	0.1
	45	68	12	0.6	0.3	19	0.13	17.6	15	18000		B71909E.2RSD.T.P4S.UL	49	63.5	0.6	0.1
45	45	75	16	1	1	16	0.24	27.5	21.2	18000	30000	B7009C.T.P4S.UL	50	69.5	1	0.3
	45	75	16	1	1	22	0.24	26.5	20	17000	28000	B7009E.T.P4S.UL	50	69.5	1	0.3
	45	75	16	1	1	16	0.24	27.5	21.2	18000		B7009C.2RSD.T.P4S.UL	50	69.5	1	0.3
	45	75	16	1	1	22	0.24	26.5	20	17000		B7009E.2RSD.T.P4S.UL	50	69.5	1	0.3
45	45	85	19	1.1	1.1	18	0.4	40.5	29	17000	28000	B7209C.T.P4S.UL	52	77.5	1	1
	45	85	19	1.1	1.1	25	0.4	39	27.5	15000	24000	B7209E.T.P4S.UL	52	77.5	1	1
	45	85	19	1.1	1.1	18	0.4	40.5	29	17000		B7209C.2RSD.T.P4S.UL	52	77.5	1	1
	45	85	19	1.1	1.1	25	0.4	39	27.5	15000		B7209E.2RSD.T.P4S.UL	52	77.5	1	1
50	50	72	12	0.6	0.3	14	0.13	19	16.6	18000	30000	B71910C.T.P4S.UL	53.5	68	0.6	0.1
	50	72	12	0.6	0.3	20	0.13	18	15.6	16000	26000	B71910E.T.P4S.UL	53.5	68	0.6	0.1
	50	72	12	0.6	0.3	14	0.13	19	16.6	18000		B71910C.2RSD.T.P4S.UL	53.5	68	0.6	0.1



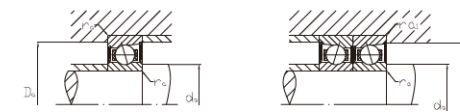
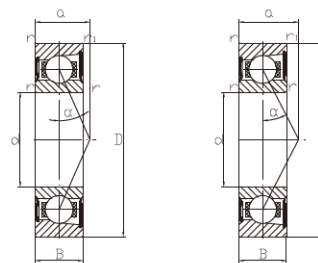
Single Row Angular Contact Ball Bearings(steel balls)

Shaft	Dimensions						Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions			
	d mm	D mm	B mm	r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a		C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm	r <sub>amax</sub> mm
	50	72	12	0.6	0.3	20	0.13	18	15.6	16000		B71910E.2RSD.T.P4S.UL	53.5	68	0.6	0.1
	50	80	16	1	1	17	0.26	28.5	22.8	17000	28000	B7010C.T.P4S.UL	55	74.5	1	0.3
	50	80	16	1	1	23	0.26	27	21.6	15000	24000	B7010E.T.P4S.UL	55	74.5	1	0.3
	50	80	16	1	1	17	0.26	28.5	22.8	17000		B7010C.T.2RSD.T.P4S.UL	55	74.5	1	0.3
	50	80	16	1	1	23	0.26	27	21.6	15000		B7010E.T.2RSD.T.P4S.UL	55	74.5	1	0.3
	50	90	20	1.1	1.1	19	0.46	43	31.5	16000	26000	B7210C.T.P4S.UL	57	82.5	1	1
	50	90	20	1.1	1.1	26	0.45	40.5	30.5	14000	22000	B7210E.T.P4S.UL	57	82.5	1	1
	50	90	20	1.1	1.1	19	0.46	43	31.5	16000		B7210C.2RSD.T.P4S.UL	57	82.5	1	1
	50	90	20	1.1	1.1	26	0.45	40.5	30.5	14000		B7210E.2RSD.T.P4S.UL	57	82.5	1	1
55	55	80	13	1	0.3	16	0.18	22.8	20.4	16000	26000	B71911C.T.P4S.UL	59.5	75	0.6	0.3
	55	80	13	1	0.3	22	0.18	21.6	19.3	15000	24000	B71911E.T.P4S.UL	59.5	75	0.6	0.3
	55	80	13	1	0.3	16	0.18	22.8	20.4	16000		B71911C.2RSD.T.P4S.UL	59.5	75	0.6	0.3
	55	80	13	1	0.3	22	0.18	21.6	19.3	15000		B71911E.2RSD.T.P4S.UL	59.5	75	0.6	0.3
	55	90	18	1.1	1.1	19	0.37	38	31	15000	24000	B7011C.T.P4S.UL	61	83.5	1	0.6
	55	90	18	1.1	1.1	26	0.37	36	29	14000	22000	B7011E.T.P4S.UL	61	83.5	1	0.6
	55	90	18	1.1	1.1	19	0.37	38	31	15000		B7011C.T.2RSD.T.P4S.UL	61	83.5	1	0.6
	55	90	18	1.1	1.1	26	0.37	36	29	14000		B7011E.T.2RSD.T.P4S.UL	61	83.5	1	0.6
	55	100	21	1.5	1.5	21	0.61	53	40	14000	22000	B7211C.T.P4S.UL	63	91.5	1.5	1.5
	55	100	21	1.5	1.5	29	0.61	50	38	13000	20000	B7211E.T.P4S.UL	63	91.5	1.5	1.5
	55	100	21	1.5	1.5	21	0.61	53	40	14000		B7211C.2RSD.T.P4S.UL	63	91.5	1.5	1.5
	55	100	21	1.5	1.5	29	0.61	50	38	13000		B7211E.2RSD.T.P4S.UL	63	91.5	1.5	1.5
60	60	85	13	1	0.3	16	0.2	24	22.8	15000	24000	B71912C.T.P4S.UL	64.5	80	0.6	0.3
	60	85	13	1	0.3	23	0.2	22.8	21.6	14000	22000	B71912E.T.P4S.UL	64.5	80	0.6	0.3
	60	85	13	1	0.3	16	0.2	24	22.8	15000		B71912C.2RSD.T.P4S.UL	64.5	80	0.6	0.3
	60	85	13	1	0.3	23	0.2	22.8	21.6	14000		B71912E.2RSD.T.P4S.UL	64.5	80	0.6	0.3
	60	95	18	1.1	1.1	19	0.4	39	33.5	14000	22000	B7012C.T.P4S.UL	66	88.5	1	0.6
	60	95	18	1.1	1.1	27	0.4	36.5	31.5	13000	20000	B7012E.T.P4S.UL	66	88.5	1	0.6
	60	95	18	1.1	1.1	19	0.4	39	33.5	14000		B7012C.T.2RSD.T.P4S.UL	66	88.5	1	0.6
	60	95	18	1.1	1.1	27	0.4	36.5	31.5	13000		B7012E.T.2RSD.T.P4S.UL	66	88.5	1	0.6
	60	110	22	1.5	1.5	23	0.8	55	44	13000	20000	B7212C.T.P4S.UL	71	99.5	1.5	1.5





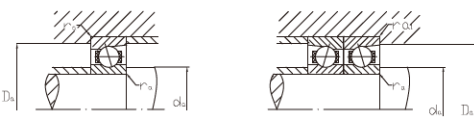
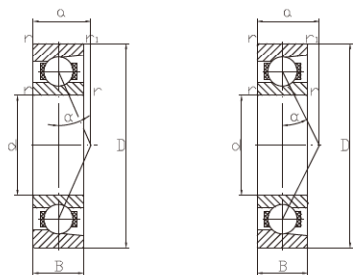
B719C, B70C, B72C  
contact angle  $\alpha = 15^\circ$



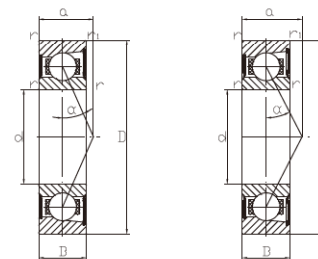
B719E, B70E, B72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(steel balls)

Shaft	Dimensions			r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a	Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions			
	d mm	D mm	B mm					C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm	r <sub>1amax</sub> mm
60	60	110	22	1.5	1.5	31	0.79	52	42.5	12000	19000	B7212E.T.P4S.UL	71	99.5	1.5	1.5
	60	110	22	1.5	1.5	23	0.8	55	44	13000		B7212C.2RSD.T.P4S.UL	71	99.5	1.5	1.5
	60	110	22	1.5	1.5	31	0.79	52	42.5	12000		B7212E.2RSD.T.P4S.UL	71	99.5	1.5	1.5
65	65	90	13	1	0.3	17	0.2	24.5	24	14000	22000	B71913C.T.P4S.UL	69.5	85	0.6	0.3
	65	90	13	1	0.3	25	0.2	22.8	22.4	13000	20000	B71913E.T.P4S.UL	69.5	85	0.6	0.3
	65	90	13	1	0.3	17	0.2	24.5	24	14000		B71913C.2RSD.T.P4S.UL	69.5	85	0.6	0.3
	65	90	13	1	0.3	25	0.2	22.8	22.4	13000		B71913E.2RSD.T.P4S.UL	69.5	85	0.6	0.3
65	65	100	18	1.1	1.1	20	0.42	40	35.5	13000	20000	B7013C.T.P4S.UL	71	93.5	1	0.6
	65	100	18	1.1	1.1	28	0.42	38	33.5	12000	19000	B7013E.T.P4S.UL	71	93.5	1	0.6
	65	100	18	1.1	1.1	20	0.42	40	35.5	13000		B7013C.2RSD.T.P4S.UL	71	93.5	1	0.6
	65	100	18	1.1	1.1	28	0.42	38	33.5	12000		B7013E.2RSD.T.P4S.UL	71	93.5	1	0.6
65	65	120	23	1.5	1.5	24	1.01	67	54	12000	19000	B7213C.T.P4S.UL	76.5	108	1.5	1.5
	65	120	23	1.5	1.5	33	1.01	64	52	11000	18000	B7213E.T.P4S.UL	76.5	108	1.5	1.5
	65	120	23	1.5	1.5	24	1.01	67	54	12000		B7213C.2RSD.T.P4S.UL	76.5	108	1.5	1.5
	65	120	23	1.5	1.5	33	1.01	64	52	11000		B7213E.2RSD.T.P4S.UL	76.5	108	1.5	1.5
70	70	100	16	1	0.3	19	0.33	33.5	32.5	13000	20000	B71914C.T.P4S.UL	75	94.5	0.6	0.3
	70	100	16	1	0.3	28	0.33	31.5	31	12000	19000	B71914E.T.P4S.UL	75	94.5	0.6	0.3
	70	100	16	1	0.3	19	0.33	33.5	32.5	13000		B71914C.2RSD.T.P4S.UL	75	94.5	0.6	0.3
	70	100	16	1	0.3	28	0.33	31.5	31	12000		B71914E.2RSD.T.P4S.UL	75	94.5	0.6	0.3
70	70	110	20	1.1	1.1	22	0.59	50	43	12000	19000	B7014C.T.P4S.UL	77	102.5	1	0.6
	70	110	20	1.1	1.1	31	0.59	46.5	41.5	11000	18000	B7014E.T.P4S.UL	77	102.5	1	0.6
	70	110	20	1.1	1.1	22	0.59	50	43	12000		B7014C.2RSD.T.P4S.UL	77	102.5	1	0.6
	70	110	20	1.1	1.1	31	0.59	46.5	41.5	11000		B7014E.2RSD.T.P4S.UL	77	102.5	1	0.6
70	70	125	24	1.5	1.5	25	1.1	69.5	58.5	11000	18000	B7214C.T.P4S.UL	81.5	113	1.5	1.5
	70	125	24	1.5	1.5	35	1.1	65.5	56	10000	17000	B7214E.T.P4S.UL	81.5	113	1.5	1.5
	70	125	24	1.5	1.5	25	1.1	69.5	58.5	11000		B7214C.2RSD.T.P4S.UL	81.5	113	1.5	1.5
	70	125	24	1.5	1.5	35	1.1	65.5	56	10000		B7214E.2RSD.T.P4S.UL	81.5	113	1.5	1.5
75	75	105	16	1	0.3	20	0.35	34	34.5	12000	19000	B71915C.T.P4S.UL	80	99.5	0.6	0.3
	75	105	16	1	0.3	29	0.35	32	32.5	11000	18000	B71915E.T.P4S.UL	80	99.5	0.6	0.3
	75	105	16	1	0.3	20	0.35	34	34.5	12000		B71915C.2RSD.T.P4S.UL	80	99.5	0.6	0.3
	75	105	16	1	0.3	29	0.35	32	32.5	11000		B71915E.2RSD.T.P4S.UL	80	99.5	0.6	0.3



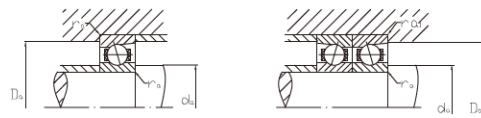
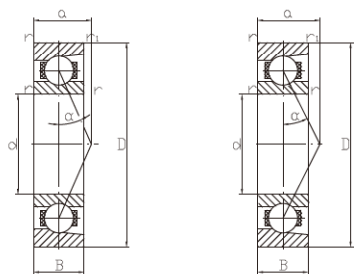
B719C, B70C, B72C  
contact angle  $\alpha = 15^\circ$



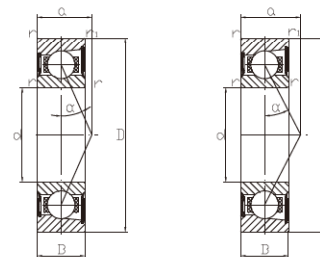
B719E, B70E, B72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(steel balls)

Shaft	Dimensions						Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions			
	d mm	D mm	B mm	r <sub>sm</sub> mm	r <sub>1sm</sub> mm	a		C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm	r <sub>amax</sub> mm
75	115	20	1.1	1.1	23	0.62	51	46.5	12000	19000	B7015C.T.P4S.UL	82	107.5	1	0.6	
	115	20	1.1	1.1	32	0.61	48	44	11000	18000	B7015E.T.P4S.UL	82	107.5	1	0.6	
	115	20	1.1	1.1	23	0.62	51	46.5	12000		B7015C.T.2RSD.T.P4S.UL	82	107.5	1	0.6	
	115	20	1.1	1.1	32	0.61	48	44	11000		B7015E.T.2RSD.T.P4S.UL	82	107.5	1	0.6	
75	130	25	1.5	1.5	26	1.21	72	63	11000	18000	B7215C.T.P4S.UL	86.5	118	1.5	1.5	
	130	25	1.5	1.5	36	1.2	68	60	9500	16000	B7215E.T.P4S.UL	86.5	118	1.5	1.5	
	130	25	1.5	1.5	26	1.21	72	63	11000		B7215C.2RSD.T.P4S.UL	86.5	118	1.5	1.5	
	130	25	1.5	1.5	36	1.2	68	60	9500		B7215E.2RSD.T.P4S.UL	86.5	118	1.5	1.5	
80	110	16	1	0.3	21	0.37	34.5	36	12000	19000	B71916C.T.P4S.UL	85	104.5	0.6	0.3	
	110	16	1	0.3	30	0.37	32.5	34	11000	18000	B71916E.T.P4S.UL	85	104.5	0.6	0.3	
	110	16	1	0.3	21	0.37	34.5	36	12000		B71916C.2RSD.T.P4S.UL	85	104.5	0.6	0.3	
	110	16	1	0.3	30	0.37	32.5	34	11000		B71916E.2RSD.T.P4S.UL	85	104.5	0.6	0.3	
80	125	22	1.1	1.1	25	0.84	63	58.5	11000	18000	B7016C.T.P4S.UL	88	116.5	1	0.6	
	125	22	1.1	1.1	35	0.83	60	55	9500	16000	B7016E.T.P4S.UL	88	116.5	1	0.6	
	125	22	1.1	1.1	25	0.84	63	58.5	11000		B7016C.T.2RSD.T.P4S.UL	88	116.5	1	0.6	
	125	22	1.1	1.1	35	0.83	60	55	9500		B7016E.T.2RSD.T.P4S.UL	88	116.5	1	0.6	
80	140	26	2	2	28	1.43	93	78	10000	17000	B7216C.T.P4S.UL	90.5	129	2	2	
	140	26	2	2	39	1.42	88	73.5	9000	15000	B7216E.T.P4S.UL	90.5	129	2	2	
85	120	18	1.1	0.6	23	0.53	45	46.5	11000	18000	B71917C.T.P4S.UL	91	113.5	0.6	0.6	
	120	18	1.1	0.6	33	0.52	42.5	44	9500	16000	B71917E.T.P4S.UL	91	113.5	0.6	0.6	
	120	18	1.1	0.6	23	0.53	45	46.5	11000		B71917C.2RSD.T.P4S.UL	91	113.5	0.6	0.6	
	120	18	1.1	0.6	33	0.52	42.5	44	9500		B71917E.2RSD.T.P4S.UL	91	113.5	0.6	0.6	
85	130	22	1.1	1.1	25	0.88	65.5	62	10000	17000	B7017C.T.P4S.UL	93	121.5	1	0.6	
	130	22	1.1	1.1	36	0.88	62	58.5	9000	15000	B7017E.T.P4S.UL	93	121.5	1	0.6	
	130	22	1.1	1.1	25	0.88	65.5	62	10000		B7017C.T.2RSD.T.P4S.UL	93	121.5	1	0.6	
	130	22	1.1	1.1	36	0.88	62	58.5	9000		B7017E.T.2RSD.T.P4S.UL	93	121.5	1	0.6	
85	150	28	2	2	30	1.8	96.5	85	9000	15000	B7217C.T.P4S.UL	98.5	137	2	2	
	150	28	2	2	42	1.81	91.5	80	8000	13000	B7217E.T.P4S.UL	98.5	137	2	2	
90	125	18	1.1	0.6	23	0.56	45.5	49	10000	17000	B71918C.T.P4S.UL	96	118.5	0.6	0.6	
	125	18	1.1	0.6	34	0.56	43	46.5	9000	15000	B71918E.T.P4S.UL	96	118.5	0.6	0.6	



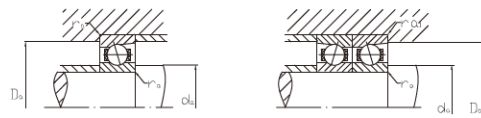
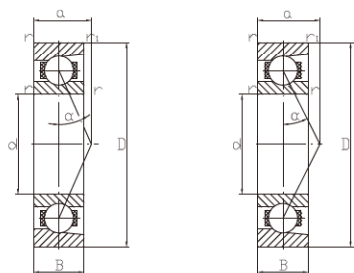
B719C, B70C, B72C  
contact angle  $\alpha = 15^\circ$



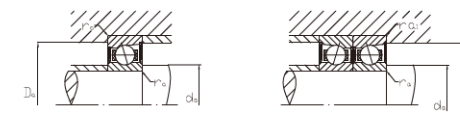
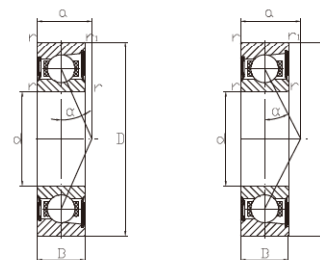
B719E, B70E, B72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(steel balls)

Shaft	Dimensions						Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions			
	d mm	D mm	B mm	r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a		C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm	r <sub>imax</sub> mm
90	125	18	1.1	0.6	23	0.56	45.5	49	10000		B71918C.2RSD.T.P4S.UL	96	118.5	0.6	0.6	
	125	18	1.1	0.6	34	0.56	43	46.5	9000		B71918E.2RSD.T.P4S.UL	96	118.5	0.6	0.6	
90	140	24	1.5	1.5	27	1.14	76.5	72	9500	16000	B7018C.T.P4S.UL	99	130.5	1.5	0.6	
	140	24	1.5	1.5	39	1.13	72	68	8500	14000	B7018E.T.P4S.UL	99	130.5	1.5	0.6	
	140	24	1.5	1.5	27	1.14	76.5	72	9500		B7018C.T.2RSD.T.P4S.UL	99	130.5	1.5	0.6	
	140	24	1.5	1.5	39	1.13	72	68	8500		B7018E.T.2RSD.T.P4S.UL	99	130.5	1.5	0.6	
90	160	30	2	2	32	2.2	122	104	8500	14000	B7218C.T.P4S.UL	103	147.5	2	2	
	160	30	2	2	44	2.19	116	100	7500	12000	B7218E.T.P4S.UL	103	147.5	2	2	
95	130	18	1.1	0.6	24	0.58	46.5	51	9500	16000	B71919C.T.P4S.UL	101	123.5	0.6	0.6	
	130	18	1.1	0.6	35	0.57	44	48	8500	14000	B71919E.T.P4S.UL	101	123.5	0.6	0.6	
	130	18	1.1	0.6	24	0.58	46.5	51	9500		B71919C.2RSD.T.P4S.UL	101	123.5	0.6	0.6	
	130	18	1.1	0.6	35	0.57	44	48	8500		B71919E.2RSD.T.P4S.UL	101	123.5	0.6	0.6	
95	145	24	1.5	1.5	28	1.19	78	76.5	9000	15000	B7019C.T.P4S.UL	104	135.5	1.5	0.6	
	145	24	1.5	1.5	40	1.18	75	72	8000	13000	B7019E.T.P4S.UL	104	135.5	1.5	0.6	
	145	24	1.5	1.5	28	1.19	78	76.5	9000		B7019C.T.2RSD.T.P4S.UL	104	135.5	1.5	0.6	
	145	24	1.5	1.5	40	1.18	75	72	8000		B7019E.T.2RSD.T.P4S.UL	104	135.5	1.5	0.6	
95	170	32	2.1	2.1	34	2.73	127	114	8000		B7219C.T.P4S.UL	110	154.5	2	2	
	170	32	2.1	2.1	47	2.72	122	108	7000	13000 11000	B7219E.T.P4S.UL	110	154.5	2	2	
100	140	20	1.1	0.6	26	0.78	58.5	64	9000		B71920C.T.P4S.UL	108	133.5	0.6	0.6	
	140	20	1.1	0.6	38	0.78	55	60	8000	15000	B71920E.T.P4S.UL	108	133.5	0.6	0.6	
	140	20	1.1	0.6	26	0.78	58.5	64	9000	13000	B71920C.2RSD.T.P4S.UL	108	133.5	0.6	0.6	
	140	20	1.1	0.6	38	0.78	55	60	8000		B71920E.2RSD.T.P4S.UL	108	133.5	0.6	0.6	
100	150	24	1.5	1.5	29	1.24	81.5	81.5	8500		B7020C.T.P4S.UL	109	140.5	1.5	0.6	
	150	24	1.5	1.5	41	1.23	76.5	76.5	7500	14000	B7020E.T.P4S.UL	109	140.5	1.5	0.6	
	150	24	1.5	1.5	29	1.24	81.5	81.5	8500	12000	B7020C.T.2RSD.T.P4S.UL	109	140.5	1.5	0.6	
	150	24	1.5	1.5	41	1.23	76.5	76.5	7500		B7020E.T.2RSD.T.P4S.UL	109	140.5	1.5	0.6	
100	180	34	2.1	2.1	36	3.21	156	137	7500	12000	B7220C.T.P4S.UL	114.5	165	2.1	2.1	
	180	34	2.1	2.1	50	3.2	150	129	6700	10000	B7220E.T.P4S.UL	114.5	165	2.1	2.1	
105	105	145	20	1.1	0.6	27	0.81	58.5	64	8500	14000	B71921C.T.P4S.UL	112	137.5	0.6	0.6



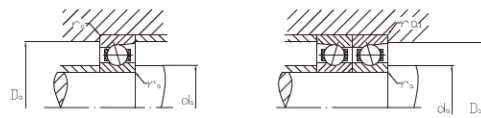
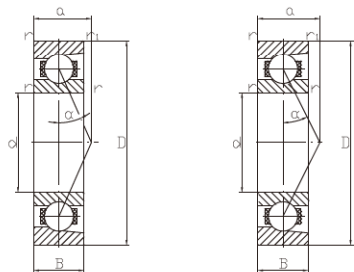
B719C, B70C, B72C  
contact angle  $\alpha = 15^\circ$



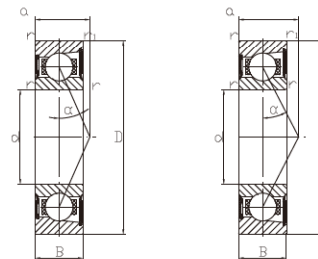
B719E, B70E, B72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(steel balls)

Shaft	Dimensions			r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a	Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions			
	d mm	D mm	B mm					C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da mm	h12Da mm	H12 mm	r <sub>amax</sub> mm
105	105	145	20	1.1	0.6	39	0.81	55	60	7500	12000	B71921E.T.P4S.UL	112	137.5	0.6	0.6
	105	145	20	1.1	0.6	27	0.81	58.5	64	8500		B71921C.2RSD.T.P4S.UL	112	137.5	0.6	0.6
	105	145	20	1.1	0.6	39	0.81	55	60	7500		B71921E.2RSD.T.P4S.UL	112	137.5	0.6	0.6
105	105	160	26	2	2	31	1.52	106	102	8000	13000	B7021C.T.P4S.UL	113	151.5	2	1
	105	160	26	2	2	44	1.51	102	98	7000	11000	B7021E.T.P4S.UL	113	151.5	2	1
	105	160	26	2	2	31	1.52	106	102	8000		B7021C.T.2RSD.T.P4S.UL	113	151.5	2	1
	105	160	26	2	2	44	1.51	102	98	7000		B7021E.T.2RSD.T.P4S.UL	113	151.5	2	1
105	105	190	36	2.1	2.1	38	3.88	163	146	7000	11000	B7221C.T.P4S.UL	122	172.5	2.1	2.1
	105	190	36	2.1	2.1	52	3.88	156	140	6300	9500	B7221E.T.P4S.UL	122	172.5	2.1	2.1
110	110	150	20	1.1	0.6	27	0.85	58.5	67	8000	13000	B71922C.T.P4S.UL	117	142.5	0.6	0.6
	110	150	20	1.1	0.6	40	0.84	56	63	7500	12000	B71922E.T.P4S.UL	117	142.5	0.6	0.6
	110	150	20	1.1	0.6	27	0.85	58.5	67	8000		B71922C.2RSD.T.P4S.UL	117	142.5	0.6	0.6
	110	150	20	1.1	0.6	40	0.84	56	63	7500		B71922E.2RSD.T.P4S.UL	117	142.5	0.6	0.6
110	110	170	28	2	2	33	1.94	110	110	7500	12000	B7022C.T.P4S.UL	120.5	159	2	1
	110	170	28	2	2	47	1.94	104	104	6700	10000	B7022E.T.P4S.UL	120.5	159	2	1
	110	170	28	2	2	33	1.94	110	110	7500		B7022C.T.2RSD.T.P4S.UL	120.5	159	2	1
	110	170	28	2	2	47	1.94	104	104	6700		B7022E.T.2RSD.T.P4S.UL	120.5	159	2	1
110	110	200	38	2.1	2.1	40	4.59	163	150	6700	10000	B7222C.T.P4S.UL	129.5	180	2.1	2.1
	110	200	38	2.1	2.1	55	4.58	153	143	6000	9000	B7222E.T.P4S.UL	129.5	180	2.1	2.1
120	120	165	22	1.1	0.6	30	1.16	73.5	85	7000	11000	B71924C.T.P4S.UL	128	156.5	0.6	0.6
	120	165	22	1.1	0.6	44	1.16	69.5	80	6700	10000	B71924E.T.P4S.UL	128	156.5	0.6	0.6
	120	165	22	1.1	0.6	30	1.16	73.5	85	7000		B71924C.2RSD.T.P4S.UL	128	156.5	0.6	0.6
	120	165	22	1.1	0.6	44	1.16	69.5	80	6700		B71924E.2RSD.T.P4S.UL	128	156.5	0.6	0.6
120	120	180	28	2	2	34	2.07	112	116	6700	10000	B7024C.T.P4S.UL	130.5	169	2	1
	120	180	28	2	2	49	2.06	106	110	6300	9500	B7024E.T.P4S.UL	130.5	169	2	1
	120	180	28	2	2	34	2.07	112	116	6700		B7024C.T.2RSD.T.P4S.UL	130.5	169	2	1
	120	180	28	2	2	49	2.06	106	110	6300		B7024E.T.2RSD.T.P4S.UL	130.5	169	2	1
120	120	215	40	2.1	2.1	43	5.29	204	196	6000	9000	B7224C.T.P4S.UL	135.5	199	2.1	2.1
	120	215	40	2.1	2.1	59	5.27	196	186	5300	8000	B7224E.T.P4S.UL	135.5	199	2.1	2.1



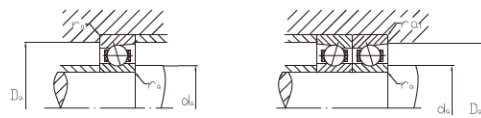
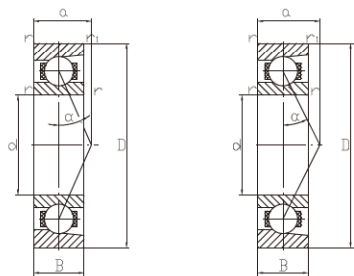
B719C, B70C, B72C  
contact angle  $\alpha = 15^\circ$



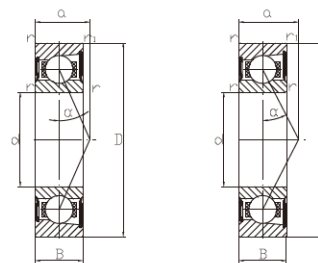
B719E, B70E, B72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(steel balls)

Shaft	Dimensions			r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a	Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions			
	d mm	D mm	B mm					C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm	r <sub>1amax</sub> mm
130	130	180	24	1.5	0.6	33	1.52	86.5	100	6700	10000	B71926C.T.P4S.UL	139	170.5	0.6	0.6
	130	180	24	1.5	0.6	48	1.52	81.5	95	6000	9000	B71926E.T.P4S.UL	139	170.5	0.6	0.6
	130	180	24	1.5	0.6	33	1.52	86.5	100	6700		B71926C.2RSD.T.P4S.UL	139	170.5	0.6	0.6
	130	180	24	1.5	0.6	48	1.52	81.5	95	6000		B71926E.2RSD.T.P4S.UL	139	170.5	0.6	0.6
130	130	200	33	2	2	39	3.15	143	150	6000	9000	B7026C.T.P4S.UL	142.5	187	2	1
	130	200	33	2	2	55	3.14	137	143	5600	8500	B7026E.T.P4S.UL	142.5	187	2	1
	130	200	33	2	2	39	3.15	143	150	6000		B7026C.T.2RSD.T.P4S.UL	142.5	187	2	1
	130	200	33	2	2	55	3.14	137	143	5600		B7026E.T.2RSD.T.P4S.UL	142.5	187	2	1
130	130	230	40	3	3	44	6.1	212	216	5600	8500	B7226C.T.P4S.UL	148	211.5	2.5	2.5
	130	230	40	3	3	62	6.08	204	204	5000	7500	B7226E.T.P4S.UL	148	211.5	2.5	2.5
140	140	190	24	1.5	0.6	34	1.63	90	108	6000	9000	B71928C.T.P4S.UL	149	180.5	0.6	0.6
	140	190	24	1.5	0.6	50	1.62	85	102	5600	8500	B71928E.T.P4S.UL	149	180.5	0.6	0.6
	140	190	24	1.5	0.6	34	1.63	90	108	6000		B71928C.2RSD.T.P4S.UL	149	180.5	0.6	0.6
	140	190	24	1.5	0.6	50	1.62	85	102	5600		B71928E.2RSD.T.P4S.UL	149	180.5	0.6	0.6
140	140	210	33	2	2	40	3.34	146	160	5600	8500	B7028C.T.P4S.UL	152.5	197	2	1
	140	210	33	2	2	57	3.33	140	150	5000	7500	B7028E.T.P4S.UL	152.5	197	2	1
	140	210	33	2	2	40	3.34	146	160	5600		B7028C.T.2RSD.T.P4S.UL	152.5	197	2	1
	140	210	33	2	2	57	3.33	140	150	5000		B7028E.T.2RSD.T.P4S.UL	152.5	197	2	1
140	140	250	42	3	3	47	7.87	220	232	5000	7500	B7228C.T.P4S.UL	163	226.5	2.5	2.5
	140	250	42	3	3	66	7.85	212	224	4500	6700	B7228E.T.P4S.UL	163	226.5	2.5	2.5
150	150	210	28	2	1	38	2.49	122	143	5600	8500	B71930C.T.P4S.UL	160.5	199	1	1
	150	210	28	2	1	56	2.48	114	134	5000	7500	B71930E.T.P4S.UL	160.5	199	1	1
150	150	225	35	2.1	2.1	43	3.99	183	193	5300	8000	B7030C.T.P4S.UL	162	212.5	2.1	1
	150	225	35	2.1	2.1	61	3.98	173	186	4800	7000	B7030E.T.P4S.UL	162	212.5	2.1	1
150	150	270	45	3	3	51	10.1	228	255	4500	6700	B7230C.T.P4S.UL	178	241.5	2.5	2.5
	150	270	45	3	3	71	10.1	216	240	4000	6000	B7230E.T.P4S.UL	178	241.5	2.5	2.5
160	160	220	28	2	1	40	2.62	125	150	5000	7500	B71932C.T.P4S.UL	170.5	209	1	1
	160	220	28	2	1	58	2.61	116	140	4800	7000	B71932E.T.P4S.UL	170.5	209	1	1



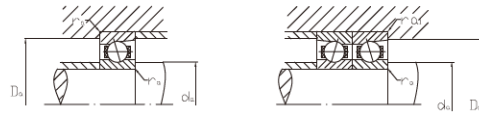
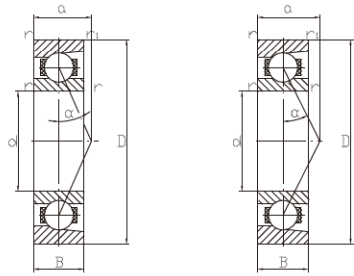
B719C, B70C, B72C  
contact angle  $\alpha = 15^\circ$



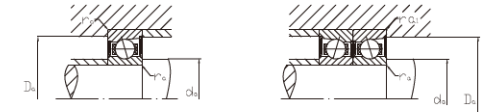
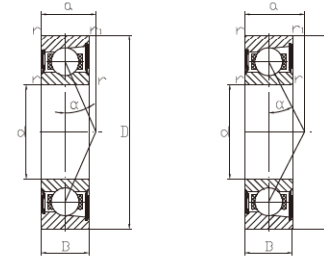
B719E, B70E, B72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(steel balls)

Shaft	Dimensions						Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions			
	d mm	D mm	B mm	r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a		C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm	r <sub>amax</sub> mm
160	240	38	2.1	2.1	46	5.01	190	208	4800	7000	B7032C.T.P4S.UL	174.5	225	2	1	
	240	38	2.1	2.1	66	4.99	176	196	4300	6300	B7032E.T.P4S.UL	174.5	225	2	1	
160	290	48	3	3	54	12.9	245	285	4300	6300	B7232C.T.P4S.UL	193	256.5	2.5	2.5	
	290	48	3	3	76	12.9	232	270	3800	5600	B7232E.T.P4S.UL	193	256.5	2.5	2.5	
170	230	28	2	1.5	41	2.78	129	163	4800	7000	B71934C.T.P4S.UL	180.5	219	1	1	
	230	28	2	1.5	61	2.77	122	150	4300	6300	B71934E.T.P4S.UL	180.5	219	1	1	
170	260	42	2.1	2.1	50	6.51	236	270	4500	6700	B7034C.T.P4S.UL	183	246.5	2	1	
	260	42	2.1	2.1	71	6.48	224	255	4000	6000	B7034E.T.P4S.UL	183	246.5	2	1	
170	310	52	4	4	58	15.6	300	360	3800	5600	B7234C.T.P4S.UL	201.5	278	3	3	
	310	52	4	4	82	15.6	280	345	3600	6300	B7234E.T.P4S.UL	201.5	278	3	3	
180	250	33	2	1	45	4.13	163	204	4500	6700	B71936C.T.P4S.UL	192.5	237	1	1	
	250	33	2	1	67	4.11	156	193	4000	6000	B71936E.T.P4S.UL	192.5	237	1	1	
180	280	46	2.1	2.1	54	8.77	245	285	4000	6000	B7036C.T.P4S.UL	198	261.5	2	1	
	280	46	2.1	2.1	77	8.74	232	275	3800	5600	B7036E.T.P4S.UL	198	261.5	2	1	
180	320	52	4	4	60	16.3	305	390	3800	5600	B7236C.T.P4S.UL	211.5	288	3	3	
	320	52	4	4	84	16.3	290	365	3400	5000	B7236E.T.P4S.UL	211.5	288	3	3	
190	260	33	2	1	47	4.31	166	212	4300	6300	B71938C.T.P4S.UL	202.5	247	1	1	
	260	33	2	1	69	4.29	156	200	3800	5600	B71938E.T.P4S.UL	202.5	247	1	1	
190	290	46	2.1	2.1	55	9.18	250	305	3800	5600	B7038C.T.P4S.UL	208	271.5	2	1	
	290	46	2.1	2.1	79	9.15	236	290	3600	5300	B7038E.T.P4S.UL	208	271.5	2	1	
190	340	55	4	4	63	20	315	415	3400	5000	B7238C.T.P4S.UL	226.5	303	3	3	
	340	55	4	4	89	19.9	300	390	3200	4800	B7238E.T.P4S.UL	226.5	303	3	3	
200	280	38	2.1	1.1	51	6.03	204	255	3800	5600	B71940C.T.P4S.UL	214.5	265	1	1	
	280	38	2.1	1.1	75	6.01	193	240	3600	5300	B71940E.T.P4S.UL	214.5	265	1	1	
200	310	51	2.1	2.1	60	11.6	305	390	3600	5300	B7040C.T.P4S.UL	216.5	293	2	1	
	310	51	2.1	2.1	85	11.5	290	365	3200	4800	B7040E.T.P4S.UL	216.5	293	2	1	



B719C, B70C, B72C  
contact angle  $\alpha = 15^\circ$



B719E, B70E, B72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(steel balls)

Shaft	Dimensions			r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a	Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions			
	d mm	D mm	B mm					C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm	r <sub>aimax</sub> mm
200	200	360	58	4	4	67	24.1	325	440	3200	4800	B7240C.T.P4S.UL	241.5	318	3	3
	200	360	58	4	4	94	24.1	310	415	3000	4500	B7240E.T.P4S.UL	241.5	318	3	3
220	220	300	38	2.1	1.1	54	6.57	216	285	3600	5300	B71944C.T.P4S.UL	234.5	285	1	1
	220	300	38	2.1	1.1	80	6.55	204	270	3200	4800	B71944E.T.P4S.UL	234.5	285	1	1
220	220	340	56	3	3	66	15.7	325	440	3200	4800	B7044C.T.P4S.UL	241.5	318	2.5	1
	220	340	56	3	3	93	15.6	310	415	3000	4500	B7044E.T.P4S.UL	241.5	318	2.5	1
220	220	400	65	4	4	74	33	400	560	2800	4300	B7244C.T.P4S.UL	263.5	356	3	3
	220	400	65	4	4	100	32.9	380	540	2600	4000	B7244E.T.P4S.UL	263.5	356	3	3
240	240	320	38	2.1	1.1	57	7.08	224	310	3200	4800	B71948C.T.P4S.UL	254.5	305	1	1
	240	320	38	2.1	1.1	84	7.06	212	285	3000	4500	B71948E.T.P4S.UL	254.5	305	1	1
240	240	360	56	3	3	68	16.7	335	465	3000	4500	B7048C.T.P4S.UL	261.5	338	2.5	1
	240	360	56	3	3	98	16.7	315	440	2800	4300	B7048E.T.P4S.UL	261.5	338	2.5	1

B7..C adjusted, in pairs or sets, contact angle  $\alpha = 15^\circ$ , restricted tolerances  
 B7..E adjusted, in pairs or sets, contact angle  $\alpha = 25^\circ$ , restricted tolerances  
 B7..C..2RSD adjusted, in pairs or sets, contact angle  $\alpha = 15^\circ$ ,  
 lip seals on both sides, non-contact, restricted tolerances  
 B7..E..2RSD adjusted, in pairs or sets, contact angle  $\alpha = 25^\circ$ ,  
 lip seals on both sides, non-contact, restricted tolerances



Single Row Angular Contact Ball Bearings(ceramic balls)

Shaft	Dimensions					Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm	r <sub>min</sub> mm	a		C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
10	10	22	6	0.3	5	0.01	1.37	0.76	100000	170000	HC71900C.T.P4S.UL	13.5	18	0.3
	10	22	6	0.3	7	0.01	1.29	0.72	85000	140000	HC71900E.T.P4S.UL	13.5	18	0.3
	10	22	6	0.3	5	0.01	1.37	0.76	100000		HCS71900C.T.P4S.UL	13.5	18	0.3
	10	22	6	0.3	7	0.01	1.29	0.72	85000		HCS71900E.T.P4S.UL	13.5	18	0.3
	10	26	8	0.3	6	0.02	1.9	1.1	90000	150000	HC7000C.T.P4S.UL	15	20.5	0.3
	10	26	8	0.3	8	0.02	1.8	1.06	75000	120000	HC7000E.T.P4S.UL	15	20.5	0.3
	10	26	8	0.3	6	0.02	1.9	1.1	90000		HCS7000C.T.P4S.UL	15	20.5	0.3
	10	26	8	0.3	8	0.02	1.8	1.06	75000		HCS7000E.T.P4S.UL	15	20.5	0.3
12	12	24	6	0.3	5	0.01	1.4	0.83	90000	150000	HC71901C.T.P4S.UL	15.5	20	0.3
	12	24	6	0.3	7	0.01	1.34	0.8	75000	120000	HC71901E.T.P4S.UL	15.5	20	0.3
	12	24	6	0.3	5	0.01	1.4	0.83	90000		HCS71901C.T.P4S.UL	15.5	20	0.3
	12	24	6	0.3	7	0.01	1.34	0.8	75000		HCS71901E.T.P4S.UL	15.5	20	0.3
	12	28	8	0.3	7	0.02	1.86	1.12	80000	130000	HC7001C.T.P4S.UL	17	22.5	0.3
	12	28	8	0.3	9	0.02	1.76	1.08	70000	110000	HC7001E.T.P4S.UL	17	22.5	0.3
	12	28	8	0.3	7	0.02	1.86	1.12	80000		HCS7001C.T.P4S.UL	17	22.5	0.3
	12	28	8	0.3	9	0.02	1.76	1.08	70000		HCS7001E.T.P4S.UL	17	22.5	0.3
15	15	28	7	0.3	6	0.01	1.93	1.22	75000	120000	HC71902C.T.P4S.UL	18.5	24	0.3
	15	28	7	0.3	9	0.01	1.83	1.16	63000	95000	HC71902E.T.P4S.UL	18.5	24	0.3
	15	28	7	0.3	6	0.01	1.93	1.22	75000		HCS71902C.T.P4S.UL	18.5	24	0.3
	15	28	7	0.3	9	0.01	1.83	1.16	63000		HCS71902E.T.P4S.UL	18.5	24	0.3
	15	32	9	0.3	8	0.03	2.6	1.7	70000	110000	HC7002C.T.P4S.UL	20	26.5	0.3
	15	32	9	0.3	10	0.03	2.45	1.6	60000	90000	HC7002E.T.P4S.UL	20	26.5	0.3
	15	32	9	0.3	8	0.03	2.6	1.7	70000		HCS7002C.T.P4S.UL	20	26.5	0.3
	15	32	9	0.3	10	0.03	2.45	1.6	60000		HCS7002E.T.P4S.UL	20	26.5	0.3
17	17	30	7	0.3	7	0.02	2	1.34	70000	110000	HC71903C.T.P4S.UL	20.5	26	0.3
	17	30	7	0.3	9	0.02	1.9	1.27	60000	90000	HC71903E.T.P4S.UL	20.5	26	0.3
	17	30	7	0.3	7	0.02	2	1.34	70000		HCS71903C.T.P4S.UL	20.5	26	0.3
	17	30	7	0.3	9	0.02	1.9	1.27	60000		HCS71903E.T.P4S.UL	20.5	26	0.3
	17	35	10	0.3	9	0.04	2.65	1.83	63000	95000	HC7003C.T.P4S.UL	22.5	29	0.3
	17	35	10	0.3	11	0.04	2.5	1.73	53000	80000	HC7003E.T.P4S.UL	22.5	29	0.3
	17	35	10	0.3	9	0.04	2.65	1.83	63000		HCS7003C.T.P4S.UL	22.5	29	0.3





Single Row Angular Contact Ball Bearings(ceramic balls)

Shaft	Dimensions					Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm	r <sub>min</sub> mm	a		C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
	17	35	10	0.3	11	0.04	2.5	1.73	53000		HCS7003E.T.P4S.UL	22.5	29	0.3
20	20	37	9	0.3	8	0.04	2.7	1.96	56000	85000	HC71904C.T.P4S.UL	25	31.5	0.3
	20	37	9	0.3	11	0.04	2.55	1.86	48000	70000	HC71904E.T.P4S.UL	25	31.5	0.3
	20	37	9	0.3	8	0.04	2.7	1.96	56000		HCS71904C.T.P4S.UL	25	31.5	0.3
	20	37	9	0.3	11	0.04	2.55	1.86	48000		HCS71904E.T.P4S.UL	25	31.5	0.3
20	20	42	12	0.6	10	0.07	4.3	3.2	53000	80000	HC7004C.T.P4S.UL	27	34.5	0.6
	20	42	12	0.6	13	0.07	4.05	3	45000	67000	HC7004E.T.P4S.UL	27	34.5	0.6
	20	42	12	0.6	10	0.07	4.3	3.2	53000		HCS7004C.T.P4S.UL	27	34.5	0.6
	20	42	12	0.6	13	0.07	4.05	3	45000		HCS7004E.T.P4S.UL	27	34.5	0.6
25	25	42	9	0.3	9	0.05	2.9	2.36	48000	70000	HC71905C.T.P4S.UL	30	36.5	0.3
	25	42	9	0.3	12	0.05	2.75	2.2	40000	60000	HC71905E.T.P4S.UL	30	36.5	0.3
	25	42	9	0.3	9	0.05	2.9	2.36	48000		HCS71905C.T.P4S.UL	30	36.5	0.3
	25	42	9	0.3	12	0.05	2.75	2.2	40000		HCS71905E.T.P4S.UL	30	36.5	0.3
25	25	47	12	0.6	11	0.09	4.3	3.45	45000	67000	HC7005C.T.P4S.UL	32	39.5	0.6
	25	47	12	0.6	14	0.09	4.05	3.25	38000	56000	HC7005E.T.P4S.UL	32	39.5	0.6
	25	47	12	0.6	11	0.09	4.3	3.45	45000		HCS7005C.T.P4S.UL	32	39.5	0.6
	25	47	12	0.6	14	0.09	4.05	3.25	38000		HCS7005E.T.P4S.UL	32	39.5	0.6
30	30	47	9	0.3	10	0.05	4.4	3.65	43000	63000	HC71906C.T.P4S.UL	34.5	42	0.3
	30	47	9	0.3	14	0.05	4.15	3.45	36000	53000	HC71906E.T.P4S.UL	34.5	42	0.3
	30	47	9	0.3	10	0.05	4.4	3.65	43000		HCS71906C.T.P4S.UL	34.5	42	0.3
	30	47	9	0.3	14	0.05	4.15	3.45	36000		HCS71906E.T.P4S.UL	34.5	42	0.3
30	30	55	13	1	12	0.12	6	4.9	38000	56000	HC7006C.T.P4S.UL	37.5	47	1
	30	55	13	1	16	0.12	5.7	4.65	32000	48000	HC7006E.T.P4S.UL	37.5	47	1
	30	55	13	1	12	0.12	6	4.9	38000		HCS7006C.T.P4S.UL	37.5	47	1
	30	55	13	1	16	0.12	5.7	4.65	32000		HCS7006E.T.P4S.UL	37.5	47	1
35	35	55	10	0.6	11	0.08	4.8	4.4	36000	53000	HC71907C.T.P4S.UL	41	48.5	0.6
	35	55	10	0.6	16	0.08	4.5	4.05	30000	45000	HC71907E.T.P4S.UL	41	48.5	0.6
	35	55	10	0.6	11	0.08	4.8	4.4	36000		HCS71907C.T.P4S.UL	41	48.5	0.6
	35	55	10	0.6	16	0.08	4.5	4.05	30000		HCS71907E.T.P4S.UL	41	48.5	0.6
35	62	14	1	14	0.16	6.4	5.85	34000	50000	HC7007C.T.P4S.UL	43.5	53	1	



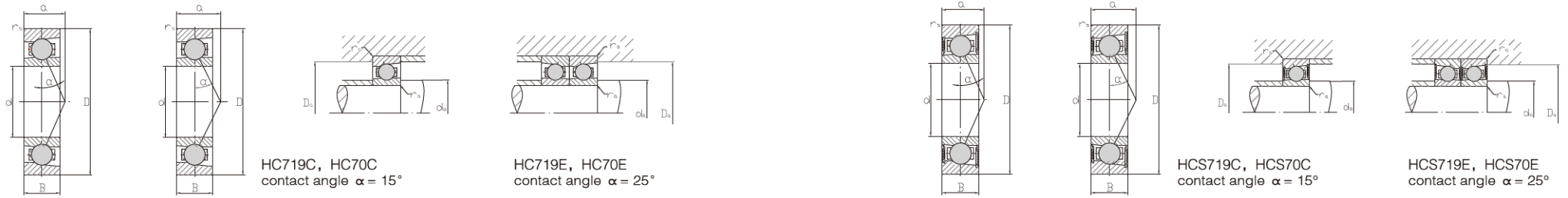
Single Row Angular Contact Ball Bearings(ceramic balls)

Shaft	Dimensions					Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm	r <sub>min</sub> mm	a		C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
35	35	62	14	1	18	0.16	6.1	5.4	28000	43000	HC7007E.T.P4S.UL	43.5	53	1
	35	62	14	1	14	0.17	6.4	5.85	34000		HCS7007C.T.P4S.UL	43.5	53	1
	35	62	14	1	18	0.17	6.1	5.4	28000		HCS7007E.T.P4S.UL	43.5	53	1
40	40	62	12	0.6	13	0.12	5	4.8	32000	48000	HC71908C.T.P4S.UL	47	54.5	0.6
	40	62	12	0.6	18	0.12	4.75	4.5	28000	43000	HC71908E.T.P4S.UL	47	54.5	0.6
	40	62	12	0.6	13	0.12	5	4.8	32000		HCS71908C.T.P4S.UL	47	54.5	0.6
	40	62	12	0.6	18	0.12	4.75	4.5	28000		HCS71908E.T.P4S.UL	47	54.5	0.6
40	40	68	15	1	15	0.21	6.8	6.55	30000	45000	HC7008C.T.P4S.UL	49	58.5	1
	40	68	15	1	20	0.21	6.4	6.1	26000	40000	HC7008E.T.P4S.UL	49	58.5	1
	40	68	15	1	15	0.21	6.8	6.55	30000		HCS7008C.T.P4S.UL	49	58.5	1
	40	68	15	1	20	0.21	6.4	6.1	26000		HCS7008E.T.P4S.UL	49	58.5	1
45	45	68	12	0.6	14	0.14	6.95	6.7	28000	43000	HC71909C.T.P4S.UL	51.5	61	0.6
	45	68	12	0.6	19	0.14	6.55	6.3	24000	38000	HC71909E.T.P4S.UL	51.5	61	0.6
	45	68	12	0.6	14	0.14	6.95	6.7	28000		HCS71909C.T.P4S.UL	51.5	61	0.6
	45	68	12	0.6	19	0.14	6.55	6.3	24000		HCS71909E.T.P4S.UL	51.5	61	0.6
45	45	75	16	1	16	0.25	8.8	8.5	26000	40000	HC7009C.T.P4S.UL	54	65.5	1
	45	75	16	1	22	0.25	8.3	8	24000	38000	HC7009E.T.P4S.UL	54	65.5	1
	45	75	16	1	16	0.25	8.8	8.5	26000		HCS7009C.T.P4S.UL	54	65.5	1
	45	75	16	1	22	0.25	8.3	8	24000		HCS7009E.T.P4S.UL	54	65.5	1
50	50	72	12	0.6	14	0.14	7.1	7.2	26000	40000	HC71910C.T.P4S.UL	56	65.5	0.6
	50	72	12	0.6	20	0.14	6.7	6.7	22000	36000	HC71910E.T.P4S.UL	56	65.5	0.6
	50	72	12	0.6	14	0.14	7.1	7.2	26000		HCS71910C.T.P4S.UL	56	65.5	0.6
	50	72	12	0.6	20	0.14	6.7	6.7	22000		HCS71910E.T.P4S.UL	56	65.5	0.6
50	50	80	16	1	17	0.27	9.15	9.15	24000	38000	HC7010C.T.P4S.UL	59	70.5	1
	50	80	16	1	23	0.27	8.65	8.5	22000	36000	HC7010E.T.P4S.UL	59	70.5	1
	50	80	16	1	17	0.27	9.15	9.15	24000		HCS7010C.T.P4S.UL	59	70.5	1
	50	80	16	1	23	0.27	8.65	8.5	22000		HCS7010E.T.P4S.UL	59	70.5	1
55	55	80	13	1	16	0.17	9.3	9.5	24000	38000	HC71911C.T.P4S.UL	61.5	73	0.6
	55	80	13	1	22	0.17	8.8	8.8	20000	34000	HC71911E.T.P4S.UL	61.5	73	0.6
	55	80	13	1	16	0.17	9.3	9.5	24000		HCS71911C.T.P4S.UL	61.5	73	0.6
	55	80	13	1	22	0.17	8.8	8.8	20000		HCS71911E.T.P4S.UL	61.5	73	0.6



Single Row Angular Contact Ball Bearings(ceramic balls)

Shaft	Dimensions					Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm	r <sub>min</sub> mm	a		C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
55	55	90	18	1.1	19	0.35	12.9	13.2	22000	36000	HC7011C.T.P4S.UL	65.5	79	1
	55	90	18	1.1	26	0.35	12.2	12.2	19000	32000	HC7011E.T.P4S.UL	65.5	79	1
	55	90	18	1.1	19	0.35	12.9	13.2	22000		HCS7011C.T.P4S.UL	65.5	79	1
	55	90	18	1.1	26	0.35	12.2	12.2	19000		HCS7011E.T.P4S.UL	65.5	79	1
60	60	85	13	1	16	0.19	9.65	10	22000	36000	HC71912C.T.P4S.UL	66.5	78	0.6
	60	85	13	1	23	0.19	9	9.5	19000	32000	HC71912E.T.P4S.UL	66.5	78	0.6
	60	85	13	1	16	0.19	9.65	10	22000		HCS71912C.T.P4S.UL	66.5	78	0.6
	60	85	13	1	23	0.19	9	9.5	19000		HCS71912E.T.P4S.UL	66.5	78	0.6
60	60	95	18	1.1	19	0.37	13.4	14	20000	34000	HC7012C.T.P4S.UL	70.5	84	1
	60	95	18	1.1	27	0.38	12.7	13.2	18000	30000	HC7012E.T.P4S.UL	70.5	84	1
	60	95	18	1.1	19	0.39	13.4	14	20000		HCS7012C.T.P4S.UL	70.5	84	1
	60	95	18	1.1	19	0.37	13.4	14	20000		HCS7012E.T.P4S.UL	70.5	84	1
65	65	90	13	1	17	0.19	9.8	10.8	20000	34000	HC71913C.T.P4S.UL	71.5	83	0.6
	65	90	13	1	25	0.19	9.3	10	18000	30000	HC71913E.T.P4S.UL	71.5	83	0.6
	65	90	13	1	17	0.19	9.8	10.8	20000		HCS71913C.T.P4S.UL	71.5	83	0.6
	65	90	13	1	25	0.19	9.3	10	18000		HCS71913E.T.P4S.UL	71.5	83	0.6
65	65	100	18	1.1	20	0.4	13.7	15	20000	34000	HC7013C.T.P4S.UL	75.5	89	1
	65	100	18	1.1	28	0.4	12.9	14	17000	28000	HC7013E.T.P4S.UL	75.5	89	1
	65	100	18	1.1	20	0.4	13.7	15	20000		HCS7013C.T.P4S.UL	75.5	89	1
	65	100	18	1.1	28	0.4	12.9	14	17000		HCS7013E.T.P4S.UL	75.5	89	1
70	70	100	16	1	19	0.32	12.7	14	19000	32000	HC71914C.T.P4S.UL	78.5	91	0.6
	70	100	16	1	28	0.32	12	13.2	16000	26000	HC71914E.T.P4S.UL	78.5	91	0.6
	70	100	16	1	19	0.32	12.7	14	19000		HCS71914C.T.P4S.UL	78.5	91	0.6
	70	100	16	1	28	0.32	12	13.2	16000		HCS71914E.T.P4S.UL	78.5	91	0.6
70	70	110	20	1.1	22	0.61	18	19.6	18000	30000	HC7014C.T.P4S.UL	82	97.5	1
	70	110	20	1.1	31	0.61	17	18.3	13000	20000	HC7014E.T.P4S.UL	82	97.5	1
	70	110	20	1.1	22	0.61	18	19.6	18000		HCS7014C.T.P4S.UL	82	97.5	1
	70	110	20	1.1	31	0.61	17	18.3	13000		HCS7014E.T.P4S.UL	82	97.5	1
75	75	105	16	1	20	0.35	12.9	15	18000	30000	HC71915C.T.P4S.UL	83.5	96	0.6
	75	105	16	1	29	0.35	12.2	13.7	15000	24000	HC71915E.T.P4S.UL	83.5	96	0.6
	75	105	16	1	20	0.35	12.9	15	18000		HCS71915C.T.P4S.UL	83.5	96	0.6



Single Row Angular Contact Ball Bearings(ceramic balls)

Shaft	Dimensions					Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm	r <sub>min</sub> mm	a		C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
	75	105	16	1	29	0.35	12.2	13.7	15000		HCS71915E.T.P4S.UL	83.5	96	0.6
	75	115	20	1.1	23	0.65	18.3	20	17000	28000	HC7015C.T.P4S.UL	87	102.5	1
	75	115	20	1.1	32	0.64	17.3	18.6	15000	24000	HC7015E.T.P4S.UL	87	102.5	1
	75	115	20	1.1	23	0.65	18.3	20	17000		HCS7015C.T.P4S.UL	87	102.5	1
	75	115	20	1.1	32	0.64	17.3	18.6	15000		HCS7015E.T.P4S.UL	87	102.5	1
80	80	110	16	1	21	0.32	14.6	16.6	17000	28000	HC71916C.T.P4S.UL	88	101.5	0.6
	80	110	16	1	30	0.32	13.7	15.6	15000	24000	HC71916E.T.P4S.UL	88	101.5	0.6
	80	110	16	1	21	0.32	14.6	16.6	17000		HCS71916C.T.P4S.UL	88	101.5	0.6
	80	110	16	1	30	0.32	13.7	15.6	15000		HCS71916E.T.P4S.UL	88	101.5	0.6
	80	125	22	1.1	25	0.87	21.6	24.5	16000	26000	HC7016C.T.P4S.UL	93.5	111	1
	80	125	22	1.1	35	0.87	20.4	22.8	13000	20000	HC7016E.T.P4S.UL	93.5	111	1
	80	125	22	1.1	25	0.87	21.6	24.5	16000		HCS7016C.T.P4S.UL	93.5	111	1
	80	125	22	1.1	35	0.87	20.4	22.8	13000		HCS7016E.T.P4S.UL	93.5	111	1
85	85	120	18	1.1	23	0.51	15	18	16000	26000	HC71917C.T.P4S.UL	95.5	109	0.6
	85	120	18	1.1	33	0.51	14.3	17	13000	20000	HC71917E.T.P4S.UL	95.5	109	0.6
	85	120	18	1.1	23	0.51	15	18	16000		HCS71917C.T.P4S.UL	95.5	109	0.6
	85	120	18	1.1	33	0.51	14.3	17	13000		HCS71917E.T.P4S.UL	95.5	109	0.6
	85	130	22	1.1	25	0.92	22	25	15000	24000	HC7017C.T.P4S.UL	98.5	116	1
	85	130	22	1.1	36	0.92	20.8	23.2	13000	20000	HC7017E.T.P4S.UL	98.5	116	1
	85	130	22	1.1	25	0.92	22	25	15000		HCS7017C.T.P4S.UL	98.5	116	1
	85	130	22	1.1	36	0.92	20.8	23.2	13000		HCS7017E.T.P4S.UL	98.5	116	1
90	90	125	18	1.1	23	0.59	16.3	19.6	15000	24000	HC71918C.T.P4S.UL	100	114.5	0.6
	90	125	18	1.1	34	0.59	15.6	18.6	13000	20000	HC71918E.T.P4S.UL	100	114.5	0.6
	90	125	18	1.1	23	0.59	16.3	19.6	15000		HCS71918C.T.P4S.UL	100	114.5	0.6
	90	125	18	1.1	34	0.59	15.6	18.6	13000		HCS71918E.T.P4S.UL	100	114.5	0.6
	90	140	24	1.5	27	1.19	26	30	14000	22000	HC7018C.T.P4S.UL	105	124.5	1.5
	90	140	24	1.5	39	1.18	24.5	28	12000	19000	HC7018E.T.P4S.UL	105	124.5	1.5
	90	140	24	1.5	27	1.19	26	30	14000		HCS7018C.T.P4S.UL	105	124.5	1.5
	90	140	24	1.5	39	1.18	24.5	28	12000		HCS7018E.T.P4S.UL	105	124.5	1.5
95	95	130	18	1.1	24	0.61	17	20.8	14000	22000	HC71919C.T.P4S.UL	105	119.5	0.6



Single Row Angular Contact Ball Bearings(ceramic balls)

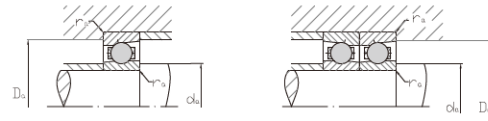
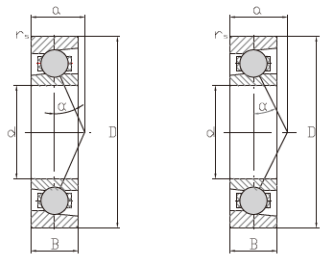
Shaft	Dimensions					Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm	r <sub>min</sub> mm	a		C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
95	130	130	18	1.1	35	0.61	16	19.3	12000	19000	HC71919E.T.P4S.UL	105	119.5	0.6
	130	130	18	1.1	24	0.61	17	20.8	14000		HCS71919C.T.P4S.UL	105	119.5	0.6
	130	130	18	1.1	35	0.61	16	19.3	12000		HCS71919E.T.P4S.UL	105	119.5	0.6
95	145	145	24	1.5	28	1.24	26	31	13000	20000	HC7019C.T.P4S.UL	110	129.5	1.5
	145	145	24	1.5	40	1.24	24.5	28.5	11000	18000	HC7019E.T.P4S.UL	110	129.5	1.5
	145	145	24	1.5	28	1.24	26	31	13000		HCS7019C.T.P4S.UL	110	129.5	1.5
	145	145	24	1.5	40	1.24	24.5	28.5	11000		HCS7019E.T.P4S.UL	110	129.5	1.5
100	140	140	20	1.1	26	0.82	20.4	25	13000	20000	HC71920C.T.P4S.UL	112	127.5	0.6
	140	140	20	1.1	38	0.82	19	23.6	11000	18000	HC71920E.T.P4S.UL	112	127.5	0.6
	140	140	20	1.1	26	0.82	20.4	25	13000		HCS71920C.T.P4S.UL	112	127.5	0.6
	140	140	20	1.1	38	0.82	19	23.6	11000		HCS71920E.T.P4S.UL	112	127.5	0.6
100	150	150	24	1.5	29	1.29	26.5	31.5	12000	19000	HC7020C.T.P4S.UL	115	134.5	1.5
	150	150	24	1.5	41	1.29	35	30	11000	18000	HC7020E.T.P4S.UL	115	134.5	1.5
	150	150	24	1.5	29	1.29	26.5	31.5	12000		HCS7020C.T.P4S.UL	115	134.5	1.5
	150	150	24	1.5	41	1.29	35	30	11000		HCS7020E.T.P4S.UL	115	134.5	1.5
105	145	145	20	1.1	27	0.85	20.8	26.5	12000	19000	HC71921C.T.P4S.UL	117	132.5	0.6
	145	145	20	1.1	39	0.85	19.6	24.5	11000	18000	HC71921E.T.P4S.UL	117	132.5	0.6
	145	145	20	1.1	27	0.85	20.8	26.5	12000		HCS71921C.T.P4S.UL	117	132.5	0.6
	145	145	20	1.1	39	0.85	19.6	24.5	11000		HCS71921E.T.P4S.UL	117	132.5	0.6
105	160	160	26	2	31	1.59	34	40.5	12000	19000	HC7021C.T.P4S.UL	121	143.5	2
	160	160	26	2	44	1.59	32	38	10000	17000	HC7021E.T.P4S.UL	121	143.5	2
	160	160	26	2	31	1.59	34	40.5	12000		HCS7021C.T.P4S.UL	121	143.5	2
	160	160	26	2	44	1.59	32	38	10000		HCS7021E.T.P4S.UL	121	143.5	2
110	150	150	20	1.1	27	0.84	24	30.5	12000	19000	HC71922C.T.P4S.UL	121	138.5	0.6
	150	150	20	1.1	40	0.84	22.8	28.5	10000	17000	HC71922E.T.P4S.UL	121	138.5	0.6
	150	150	20	1.1	27	0.84	24	30.5	12000		HCS71922C.T.P4S.UL	121	138.5	0.6
	150	150	20	1.1	40	0.84	22.8	28.5	10000		HCS71922E.T.P4S.UL	121	138.5	0.6
110	170	170	28	2	33	2.05	34.5	41.5	11000	18000	HC7022C.T.P4S.UL	128.5	151	2
	170	170	28	2	47	2.05	32.5	39	9000	15000	HC7022E.T.P4S.UL	128.5	151	2
	170	170	28	2	33	2.05	34.5	41.5	11000		HCS7022C.T.P4S.UL	128.5	151	2
	170	170	28	2	47	2.05	32.5	39	9000		HCS7022E.T.P4S.UL	128.5	151	2



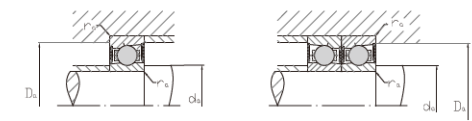
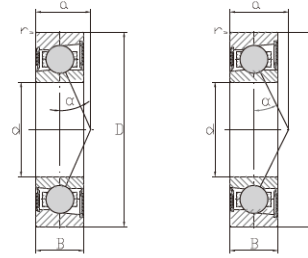
Single Row Angular Contact Ball Bearings(ceramic balls)

Shaft	Dimensions					Mass ≈ kg	Load rating			Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm	r <sub>smin</sub> mm	a		C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway	da h12 mm		Da H12 mm	r <sub>amax</sub> mm	
120	120	165	22	1.1	30	1.22	25	33.5	11000	18000	HC71924C.T.P4S.UL	133.5	151	0.6	
	120	165	22	1.1	44	1.22	23.6	31	9000	15000	HC71924E.T.P4S.UL	133.5	151	0.6	
	120	165	22	1.1	30	1.22	25	33.5	11000		HCS71924C.T.P4S.UL	133.5	151	0.6	
	120	165	22	1.1	44	1.22	23.6	31	9000		HCS71924E.T.P4S.UL	133.5	151	0.6	
120	180	180	28	2	34	2.2	35.5	44	10000	17000	HC7024C.T.P4S.UL	138.5	161	2	
	120	180	28	2	49	2.2	33.5	41.5	8500	14000	HC7024E.T.P4S.UL	138.5	161	2	
	120	180	28	2	34	2.2	35.5	44	10000		HCS7024C.T.P4S.UL	138.5	161	2	
	120	180	28	2	49	2.2	33.5	41.5	8500		HCS7024E.T.P4S.UL	138.5	161	2	
130	130	180	24	1.5	33	1.59	29	39	9500	15000	HC71926C.T.P4S.UL	145	164.5	0.6	
	130	180	24	1.5	48	1.59	27	36.5	8000	13000	HC71926E.T.P4S.UL	145	164.5	0.6	
	130	180	24	1.5	33	1.59	29	39	9500		HCS71926C.T.P4S.UL	145	164.5	0.6	
	130	180	24	1.5	48	1.59	27	36.5	8000		HCS71926E.T.P4S.UL	145	164.5	0.6	
130	200	200	33	2	39	3.52	45.5	58.5	9000	15000	HC7026C.T.P4S.UL	152	177.5	2	
	130	200	33	2	55	3.51	42.5	54	7500	12000	HC7026E.T.P4S.UL	152	177.5	2	
	130	200	33	2	39	3.52	45.5	58.5	9000		HCS7026C.T.P4S.UL	152	177.5	2	
	130	200	33	2	55	3.51	42.5	54	7500		HCS7026E.T.P4S.UL	152	177.5	2	
140	140	190	24	1.5	34	1.69	29	40.5	9000	15000	HC71928C.T.P4S.UL	155	174.5	0.6	
	140	190	24	1.5	50	1.69	27.5	38	7500	12000	HC71928E.T.P4S.UL	155	174.5	0.6	
	140	190	24	1.5	34	1.69	29	40.5	9000		HCS71928C.T.P4S.UL				
	140	190	24	1.5	50	1.69	27.5	38	7500		HCS71928E.T.P4S.UL				
140	210	210	33	2	40	3.74	46.5	61	8500	14000	HC7028C.T.P4S.UL	162	187.5	2	
	140	210	33	2	57	3.74	44	57	7000	11000	HC7028E.T.P4S.UL	162	187.5	2	
	140	210	33	2	40	3.74	46.5	61	8500		HCS7028C.T.P4S.UL	162	187.5	2	
	140	210	33	2	57	3.74	44	57	7000		HCS7028E.T.P4S.UL	162	187.5	2	

HC7..C adjusted, in pairs or sets, contact angle  $\alpha = 15^\circ$ , with ceramic balls, restricted tolerances  
 HC7..E adjusted, in pairs or sets, contact angle  $\alpha = 25^\circ$ , with ceramic balls, restricted tolerances  
 HCS7..C adjusted, in pairs or sets, contact angle  $\alpha = 15^\circ$ , with ceramic balls, lip seals on both sides, non-contact, restricted tolerances  
 HCS7..E adjusted, in pairs or sets, contact angle  $\alpha = 25^\circ$ , with ceramic balls, lip seals on both sides, non-contact, restricted tolerances



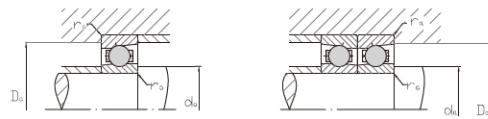
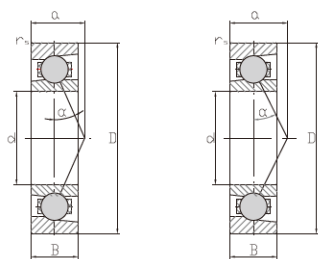
HCB719C, HCB70C, HCB72C  
contact angle  $\alpha = 15^\circ$



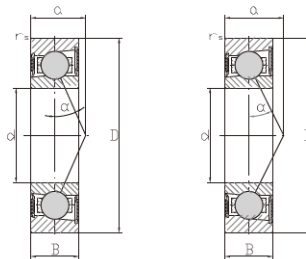
HCB719E, HCB70E, HCB72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(ceramic balls)

Shaft	Dimensions			r <sub>sm</sub> mm	r <sub>1sm</sub> mm	a mm	Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm					C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>am</sub> mm
10	10	22	6	0.3	0.15	5	0.01	2.08	1.06	90000	150000	HCB71900C.T.P4S.UL	12	19.5	0.3
	10	22	6	0.3	0.15	7	0.01	2	1	75000	100000	HCB71900E.T.P4S.UL	12	19.5	0.3
	10	22	6	0.3	0.15	5	0.01	2.08	1.06	90000		HCB71900C.2RSD.T.P4S.UL	12	19.5	0.3
	10	22	6	0.3	0.15	7	0.01	2	1	75000		HCB71900E.2RSD.T.P4S.UL	12	19.5	0.3
	10	26	8	0.3	0.3	6	0.02	2.9	1.43	80000	130000	HCB7000C.T.P4S.UL	12.5	23.5	0.3
	10	26	8	0.3	0.3	8	0.02	2.8	1.4	67000	100000	HCB7000E.T.P4S.UL	12.5	23.5	0.3
	10	26	8	0.3	0.3	6	0.02	2.9	1.43	80000		HCB7000C.2RSD.T.P4S.UL	12.5	23.5	0.3
	10	26	8	0.3	0.3	8	0.02	2.8	1.4	67000		HCB7000E.2RSD.T.P4S.UL	12.5	23.5	0.3
10	30	9	0.6	0.6	7	0.03	4	2.04	67000	100000	HCB7200C.T.P4S.UL	14.5	25.5	0.6	
	30	9	0.6	0.6	9	0.03	3.9	1.96	60000	90000	HCB7200E.T.P4S.UL	14.5	25.5	0.6	
	30	9	0.6	0.6	7	0.03	4	2.04	67000		HCB7200C.2RSD.T.P4S.UL	14.5	25.5	0.6	
	30	9	0.6	0.6	9	0.03	3.9	1.96	60000		HCB7200E.2RSD.T.P4S.UL	14.5	25.5	0.6	
12	12	24	6	0.3	0.15	5	0.01	2.32	1.29	80000	130000	HCB71901C.T.P4S.UL	15	21.5	0.3
	12	24	6	0.3	0.15	7	0.01	2.2	1.22	67000	100000	HCB71901E.T.P4S.UL	15	21.5	0.3
	12	24	6	0.3	0.15	5	0.01	2.32	1.29	80000		HCB71901C.2RSD.T.P4S.UL	15	21.5	0.3
	12	24	6	0.3	0.15	7	0.01	2.2	1.22	67000		HCB71901E.2RSD.T.P4S.UL	15	21.5	0.3
12	28	8	0.3	0.3	7	0.02	3.25	1.8	70000	110000	HCB7001C.T.P4S.UL	16.5	25.5	0.3	
	28	8	0.3	0.3	9	0.02	3.15	1.73	60000	90000	HCB7001E.T.P4S.UL	16.5	25.5	0.3	
	28	8	0.3	0.3	7	0.02	3.25	1.8	70000		HCB7001C.2RSD.T.P4S.UL	16.5	25.5	0.3	
	28	8	0.3	0.3	9	0.02	3.15	1.73	60000		HCB7001E.2RSD.T.P4S.UL	16.5	25.5	0.3	
12	32	10	0.6	0.6	8	0.03	5.3	2.7	63000	95000	HCB7201C.T.P4S.UL	16.5	27.5	0.6	
	32	10	0.6	0.6	10	0.03	5.1	2.6	53000	80000	HCB7201E.T.P4S.UL	16.5	27.5	0.6	
	32	10	0.6	0.6	8	0.03	5.3	2.7	63000		HCB7201C.2RSD.T.P4S.UL	16.5	27.5	0.6	
	32	10	0.6	0.6	10	0.03	5.1	2.6	53000		HCB7201E.2RSD.T.P4S.UL	16.5	27.5	0.6	
15	15	28	7	0.3	0.15	6	0.01	3.45	2	63000	95000	HCB71902C.T.P4S.UL	18	25.5	0.3
	15	28	7	0.3	0.15	9	0.01	3.35	1.93	56000	85000	HCB71902E.T.P4S.UL	18	25.5	0.3
	15	28	7	0.3	0.15	6	0.01	3.45	2	63000		HCB71902C.2RSD.T.P4S.UL	18	25.5	0.3
	15	28	7	0.3	0.15	9	0.01	3.35	1.93	56000		HCB71902E.2RSD.T.P4S.UL	18	25.5	0.3
15	32	9	0.3	0.3	8	0.03	4.3	2.36	60000	90000	HCB7002C.T.P4S.UL	19	29	0.3	
	32	9	0.3	0.3	10	0.03	4.15	2.24	50000	75000	HCB7002E.T.P4S.UL	19	29	0.3	
	32	9	0.3	0.3	8	0.03	4.3	2.36	60000		HCB7002C.2RSD.T.P4S.UL	19	29	0.3	



HCB719C, HCB70C, HCB72C  
contact angle  $\alpha = 15^\circ$

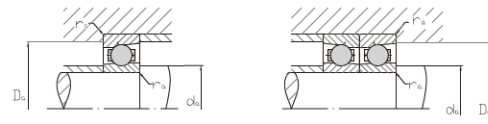
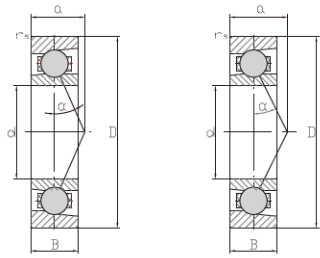


HCB719E, HCB70E, HCB72E  
contact angle  $\alpha = 25^\circ$

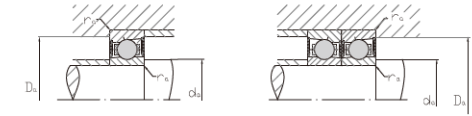
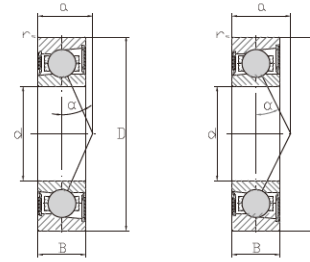
Single Row Angular Contact Ball Bearings(ceramic balls)

Shaft Dimensions			Mass				Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
d mm	D mm	B mm	r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a mm	≈ kg	C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
15	32	9	0.3	0.3	10	0.03	4.15	2.24	50000		HCB7002E.T.2RSD.T.P4S.UL	19	29	0.3
15	35	11	0.6	0.6	9	0.04	6.7	3.45	56000	85000	HCB7202C.T.P4S.UL	19.5	30.5	0.6
15	35	11	0.6	0.6	11	0.04	6.4	3.35	48000	70000	HCB7202E.T.P4S.UL	19.5	30.5	0.6
15	35	11	0.6	0.6	9	0.04	6.7	3.45	56000		HCB7202C.2RSD.T.P4S.UL	19.5	30.5	0.6
15	35	11	0.6	0.6	11	0.04	6.4	3.35	48000		HCB7202E.2RSD.T.P4S.UL	19.5	30.5	0.6
17	30	7	0.3	0.15	7	0.02	3.65	2.2	60000	90000	HCB71903C.T.P4S.UL	20	27.5	0.3
17	30	7	0.3	0.15	9	0.02	3.45	2.08	50000	75000	HCB71903E.T.P4S.UL	20	27.5	0.3
17	30	7	0.3	0.15	7	0.02	3.65	2.2	60000		HCB71903C.2RSD.T.P4S.UL	20	27.5	0.3
17	30	7	0.3	0.15	9	0.02	3.45	2.08	50000		HCB71903E.2RSD.T.P4S.UL	20	27.5	0.3
17	35	10	0.3	0.3	9	0.03	6	3.45	53000	80000	HCB7003C.T.P4S.UL	21	32	0.3
17	35	10	0.3	0.3	11	0.03	5.7	3.25	45000	67000	HCB7003E.T.P4S.UL	21	32	0.3
17	35	10	0.3	0.3	9	0.03	6	3.45	53000		HCB7003C.2RSD.T.P4S.UL	21	32	0.3
17	35	10	0.3	0.3	11	0.03	5.7	3.25	45000		HCB7003E.2RSD.T.P4S.UL	21	32	0.3
17	40	12	0.6	0.6	10	0.06	7.5	4.05	50000	75000	HCB7203C.T.P4S.UL	22.5	34.5	0.6
17	40	12	0.6	0.6	13	0.06	7.2	3.9	43000	63000	HCB7203E.T.P4S.UL	22.5	34.5	0.6
17	40	12	0.6	0.6	10	0.06	7.5	4.05	50000		HCB7203C.2RSD.T.P4S.UL	22.5	34.5	0.6
17	40	12	0.6	0.6	13	0.06	7.2	3.9	43000		HCB7203E.2RSD.T.P4S.UL	22.5	34.5	0.6
20	37	9	0.3	0.15	8	0.03	5	3.2	50000	75000	HCB71904C.T.P4S.UL	24	33.5	0.3
20	37	9	0.3	0.15	11	0.03	4.8	3.05	43000	63000	HCB71904E.T.P4S.UL	24	33.5	0.3
20	37	9	0.3	0.15	8	0.03	5	3.2	50000		HCB71904C.2RSD.T.P4S.UL	24	33.5	0.3
20	37	9	0.3	0.15	11	0.03	4.8	3.05	43000		HCB71904E.2RSD.T.P4S.UL	24	33.5	0.3
20	42	12	0.6	0.6	10	0.06	7.2	4.15	45000	67000	HCB7004C.T.P4S.UL	25	37	0.6
20	42	12	0.6	0.6	13	0.06	6.95	4	38000	56000	HCB7004E.T.P4S.UL	25	37	0.6
20	42	12	0.6	0.6	10	0.06	7.2	4.15	45000		HCB7004C.2RSD.T.P4S.UL	25	37	0.6
20	42	12	0.6	0.6	13	0.06	6.95	4	38000		HCB7004E.2RSD.T.P4S.UL	25	37	0.6
20	47	14	1	1	12	0.09	10	5.6	40000	60000	HCB7204C.T.P4S.UL	26.5	40.5	1
20	47	14	1	1	15	0.09	9.65	5.4	36000	53000	HCB7204E.T.P4S.UL	26.5	40.5	1
20	47	14	1	1	12	0.09	10	5.6	40000		HCB7204C.2RSD.T.P4S.UL	26.5	40.5	1
20	47	14	1	1	15	0.09	9.65	5.4	36000		HCB7204E.2RSD.T.P4S.UL	26.5	40.5	1
25	42	9	0.3	0.15	9	0.04	5.2	3.55	43000	63000	HCB71905C.T.P4S.UL	29	38.5	0.3





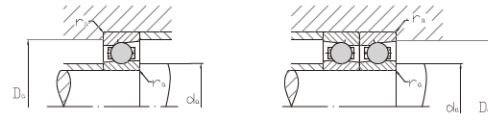
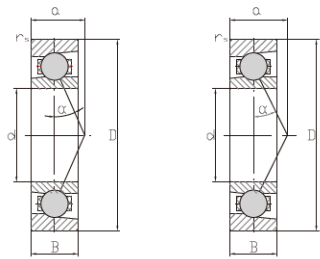
HCB719C, HCB70C, HCB72C  
contact angle  $\alpha = 15^\circ$



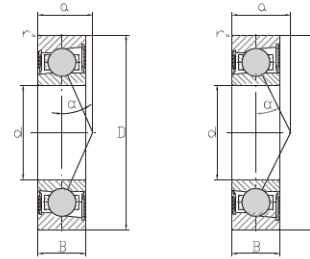
HCB719E, HCB70E, HCB72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(ceramic balls)

Shaft Dimensions			Mass			Load rating			Attainable Speed		Bearing Code	Abutment dimensions		
d mm	D mm	B mm	r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a mm	≈ kg	C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
25	42	9	0.3	0.15	12	0.04	5.3	3.8	36000	53000	HCB71905E.T.P4S.UL	29	38.5	0.3
25	42	9	0.3	0.15	9	0.04	5.2	3.55	43000		HCB71905C.2RSD.T.P4S.UL	29	38.5	0.3
25	42	9	0.3	0.15	12	0.04	5.3	3.8	36000		HCB71905E.2RSD.T.P4S.UL	29	38.5	0.3
25	47	12	0.6	0.6	11	0.07	10	6.3	38000	56000	HCB7005C.T.P4S.UL	30	42	0.6
25	47	12	0.6	0.6	14	0.07	9.5	6	34000	50000	HCB7005E.T.P4S.UL	30	42	0.6
25	47	12	0.6	0.6	11	0.07	10	6.3	38000		HCB7005C.T.2RSD.T.P4S.UL	30	42	0.6
25	47	12	0.6	0.6	14	0.07	9.5	6	34000		HCB7005E.T.2RSD.T.P4S.UL	30	42	0.6
25	52	15	1	1	13	0.11	10.8	6.55	36000	53000	HCB7205C.T.P4S.UL	31.5	45.5	1
25	52	15	1	1	17	0.11	10.4	6.2	32000	48000	HCB7205E.T.P4S.UL	31.5	45.5	1
25	52	15	1	1	13	0.11	10.8	6.55	36000		HCB7205C.2RSD.T.P4S.UL	31.5	45.5	1
25	52	15	1	1	17	0.11	10.4	6.2	32000		HCB7205E.2RSD.T.P4S.UL	31.5	45.5	1
30	30	47	9	0.3	10	0.05	6	4.65	36000	53000	HCB71906C.T.P4S.UL	34	43.5	0.3
30	30	47	9	0.3	14	0.05	5.6	4.4	32000	48000	HCB71906E.T.P4S.UL	34	43.5	0.3
30	30	47	9	0.3	10	0.05	6	4.65	36000		HCB71906C.2RSD.T.P4S.UL	34	43.5	0.3
30	30	47	9	0.3	14	0.05	5.6	4.4	32000		HCB71906E.2RSD.T.P4S.UL	34	43.5	0.3
30	55	13	1	1	12	0.1	10.4	7.2	32000	48000	HCB7006C.T.P4S.UL	36	49	1
30	55	13	1	1	17	0.1	10	6.8	28000	43000	HCB7006E.T.P4S.UL	36	49	1
30	55	13	1	1	12	0.1	10.4	7.2	32000		HCB7006C.T.2RSD.T.P4S.UL	36	49	1
30	55	13	1	1	17	0.1	10	6.8	28000		HCB7006E.T.2RSD.T.P4S.UL	36	49	1
30	62	16	1	1	14	0.17	16	10.2	30000	45000	HCB7206C.T.P4S.UL	37.5	54.5	1
30	62	16	1	1	19	0.17	15.3	9.8	26000	40000	HCB7206E.T.P4S.UL	37.5	54.5	1
30	62	16	1	1	14	0.17	16	10.2	30000		HCB7206C.2RSD.T.P4S.UL	37.5	54.5	1
30	62	16	1	1	19	0.17	15.3	9.8	26000		HCB7206E.2RSD.T.P4S.UL	37.5	54.5	1
35	35	55	10	0.6	11	0.07	8.15	6.55	30000	45000	HCB71907C.T.P4S.UL	40	51.5	0.6
35	35	55	10	0.6	16	0.07	7.65	6.3	26000	40000	HCB71907E.T.P4S.UL	40	51.5	0.6
35	35	55	10	0.6	11	0.07	8.15	6.55	30000		HCB71907C.2RSD.T.P4S.UL	40	51.5	0.6
35	35	55	10	0.6	16	0.07	7.65	6.3	26000		HCB71907E.2RSD.T.P4S.UL	40	51.5	0.6
35	62	14	1	1	14	0.14	13.2	9.5	28000	43000	HCB7007C.T.P4S.UL	41	56	1
35	62	14	1	1	18	0.14	12.5	9	24000	38000	HCB7007E.T.P4S.UL	41	56	1
35	62	14	1	1	14	0.14	13.2	9.5	28000		HCB7007C.T.2RSD.T.P4S.UL	41	56	1
35	62	14	1	1	18	0.14	12.5	9	24000		HCB7007E.T.2RSD.T.P4S.UL	41	56	1



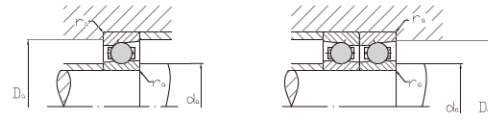
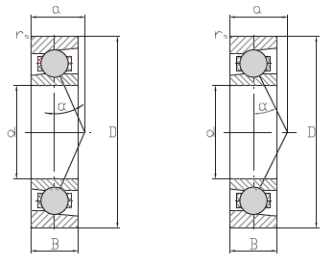
HCB719C, HCB70C, HCB72C  
contact angle  $\alpha = 15^\circ$



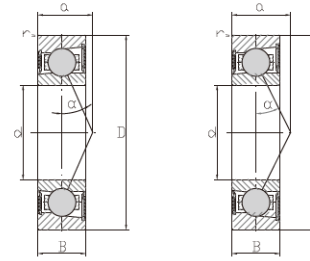
HCB719E, HCB70E, HCB72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(ceramic balls)

Shaft Dimensions			Mass				Load rating			Attainable Speed		Bearing Code	Abutment dimensions		
d mm	D mm	B mm	r <sub>sm</sub> mm	r <sub>1sm</sub> mm	a mm	≈ kg	C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>am</sub> mm	
35	72	17	1.1	1.1	16	0.27	17.6	12.5	26000	40000	HCB7207C.T.P4S.UL	44	63	1	
35	72	17	1.1	1.1	21	0.27	16.6	12	22000	36000	HCB7207E.T.P4S.UL	44	63	1	
35	72	17	1.1	1.1	16	0.27	17.6	12.5	26000		HCB7207C.2RSD.T.P4S.UL	44	63	1	
35	72	17	1.1	1.1	21	0.27	16.6	12	22000		HCB7207E.2RSD.T.P4S.UL	44	63	1	
40	40	62	12	0.6	0.3	13	0.1	12.2	28000	43000	HCB71908C.T.P4S.UL	45	58.5	0.6	
40	62	12	0.6	0.3	18	0.1	11.4	9.15	24000	38000	HCB71908E.T.P4S.UL	45	58.5	0.6	
40	62	12	0.6	0.3	13	0.1	12.2	9.65	28000		HCB71908C.2RSD.T.P4S.UL	45	58.5	0.6	
40	62	12	0.6	0.3	18	0.1	11.4	9.15	24000		HCB71908E.2RSD.T.P4S.UL	45	58.5	0.6	
40	68	15	1	1	15	0.18	14.3	11	26000	40000	HCB7008C.T.P4S.UL	46	62	1	
40	68	15	1	1	20	0.18	13.4	10.6	22000	36000	HCB7008E.T.P4S.UL	46	62	1	
40	68	15	1	1	15	0.18	14.3	11	26000		HCB7008C.T.2RSD.T.P4S.UL	46	62	1	
40	68	15	1	1	20	0.18	13.4	10.6	22000		HCB7008E.T.2RSD.T.P4S.UL	46	62	1	
40	80	18	1.1	1.1	17	0.32	22	15.6	24000	38000	HCB7208C.T.P4S.UL	48	72	1	
40	80	18	1.1	1.1	23	0.32	21.2	15	20000	34000	HCB7208E.T.P4S.UL	48	72	1	
40	80	18	1.1	1.1	17	0.32	22	15.6	24000		HCB7208C.2RSD.T.P4S.UL	48	72	1	
40	80	18	1.1	1.1	23	0.32	21.2	15	20000		HCB7208E.2RSD.T.P4S.UL	48	72	1	
45	45	68	12	0.6	0.3	14	0.11	12.9	24000	38000	HCB71909C.T.P4S.UL	50	63.5	0.6	
45	68	12	0.6	0.3	19	0.11	12.2	10.4	22000	36000	HCB71909E.T.P4S.UL	50	63.5	0.6	
45	68	12	0.6	0.3	14	0.11	12.9	10.8	24000		HCB71909C.2RSD.T.P4S.UL	50	63.5	0.6	
45	68	12	0.6	0.3	19	0.11	12.2	10.4	22000		HCB71909E.2RSD.T.P4S.UL	50	63.5	0.6	
45	75	16	1	1	16	0.2	19	14.6	24000	38000	HCB7009C.T.P4S.UL	51	69	1	
45	75	16	1	1	22	0.2	18	14	20000	34000	HCB7009E.T.P4S.UL	51	69	1	
45	75	16	1	1	16	0.2	19	14.6	24000		HCB7009C.T.2RSD.T.P4S.UL	51	69	1	
45	75	16	1	1	22	0.2	18	14	20000		HCB7009E.T.2RSD.T.P4S.UL	51	69	1	
45	85	19	1.1	1.1	18	0.37	23.2	17.3	22000	36000	HCB7209C.T.P4S.UL	52.5	78	1	
45	85	19	1.1	1.1	25	0.37	22	16.3	18000	30000	HCB7209E.T.P4S.UL	52.5	78	1	
45	85	19	1.1	1.1	18	0.37	23.2	17.3	22000		HCB7209C.2RSD.T.P4S.UL	52.5	78	1	
45	85	19	1.1	1.1	25	0.37	22	16.3	18000		HCB7209E.2RSD.T.P4S.UL	52.5	78	1	
50	50	72	12	0.6	0.3	14	0.11	13.2	22000	36000	HCB71910C.T.P4S.UL	55	67.5	0.6	
50	72	12	0.6	0.3	20	0.11	12.2	11	20000	34000	HCB71910E.T.P4S.UL	55	67.5	0.6	
50	72	12	0.6	0.3	14	0.11	13.2	11.6	22000		HCB71910C.2RSD.T.P4S.UL	55	67.5	0.6	



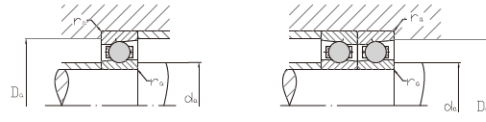
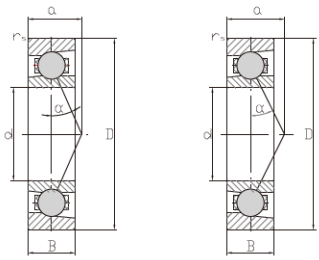
HCB719C, HCB70C, HCB72C  
contact angle  $\alpha = 15^\circ$



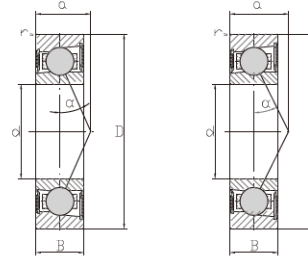
HCB719E, HCB70E, HCB72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(ceramic balls)

Shaft Dimensions			Mass				Load rating			Attainable Speed		Bearing Code	Abutment dimensions		
d mm	D mm	B mm	r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a mm	≈ kg	C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm	
50	72	12	0.6	0.3	20	0.11	12.2	11	20000		HCB71910E.2RSD.T.P4S.UL	55	67.5	0.6	
50	80	16	1	1	17	0.22	19.6	16	22000	36000	HCB7010C.T.P4S.UL	56	74	1	
50	80	16	1	1	23	0.22	18.6	15.3	18000	30000	HCB7010E.T.P4S.UL	56	74	1	
50	80	16	1	1	17	0.22	19.6	16	22000		HCB7010C.T.2RSD.T.P4S.UL	56	74	1	
50	80	16	1	1	23	0.22	18.6	15.3	18000		HCB7010E.T.2RSD.T.P4S.UL	56	74	1	
50	90	20	1.1	1.1	19	0.38	30	22	20000	34000	HCB7210C.T.P4S.UL	57	83	1	
50	90	20	1.1	1.1	26	0.38	28	21.2	17000	28000	HCB7210E.T.P4S.UL	57	83	1	
50	90	20	1.1	1.1	19	0.38	30	22	20000		HCB7210C.2RSD.T.P4S.UL	57	83	1	
50	90	20	1.1	1.1	26	0.38	28	21.2	17000		HCB7210E.2RSD.T.P4S.UL	57	83	1	
55	55	80	13	1	0.3	16	0.15	16	14.3	20000	34000	HCB71911C.T.P4S.UL	60	75.5	0.6
55	80	13	1	0.3	22	0.15	15	13.4	18000	30000	HCB71911E.T.P4S.UL	60	75.5	0.6	
55	80	13	1	0.3	16	0.15	16	14.3	20000		HCB71911C.2RSD.T.P4S.UL	60	75.5	0.6	
55	80	13	1	0.3	22	0.15	15	13.4	18000		HCB71911E.2RSD.T.P4S.UL	60	75.5	0.6	
55	90	18	1.1	1.1	19	0.33	26	21.6	19000	32000	HCB7011C.T.P4S.UL	62	83	1	
55	90	18	1.1	1.1	26	0.33	25	20.4	17000	28000	HCB7011E.T.P4S.UL	62	83	1	
55	90	18	1.1	1.1	19	0.33	26	21.6	19000		HCB7011C.T.2RSD.T.P4S.UL	62	83	1	
55	90	18	1.1	1.1	26	0.33	25	20.4	17000		HCB7011E.2RSD.T.P4S.UL	62	83	1	
55	100	21	1.5	1.5	21	0.55	32	26	18000	30000	HCB7211C.T.P4S.UL	63	92	1.5	
55	100	21	1.5	1.5	29	0.55	30.5	24.5	15000	24000	HCB7211E.T.P4S.UL	63	92	1.5	
55	100	21	1.5	1.5	21	0.55	32	26	18000		HCB7211C.2RSD.T.P4S.UL	63	92	1.5	
55	100	21	1.5	1.5	29	0.55	30.5	24.5	15000		HCB7211E.2RSD.T.P4S.UL	63	92	1.5	
60	60	85	13	1	0.3	16	0.16	16.6	16	19000	32000	HCB71912C.T.P4S.UL	65	80.5	0.6
60	85	13	1	0.3	23	0.16	15.6	15	17000	28000	HCB71912E.T.P4S.UL	65	80.5	0.6	
60	85	13	1	0.3	16	0.16	16.6	16	19000		HCB71912C.2RSD.T.P4S.UL	65	80.5	0.6	
60	85	13	1	0.3	23	0.16	15.6	15	17000		HCB71912E.2RSD.T.P4S.UL	65	80.5	0.6	
60	95	18	1.1	1.1	19	0.35	27	23.2	18000	30000	HCB7012C.T.P4S.UL	67	88	1	
60	95	18	1.1	1.1	27	0.35	25.5	22	15000	24000	HCB7012E.T.P4S.UL	67	88	1	
60	95	18	1.1	1.1	19	0.35	27	23.2	18000		HCB7012C.T.2RSD.T.P4S.UL	67	88	1	
60	95	18	1.1	1.1	27	0.35	25.5	22	15000		HCB7012E.T.2RSD.T.P4S.UL	67	88	1	
60	110	22	1.5	1.5	23	0.69	38	30.5	16000	26000	HCB7212C.T.P4S.UL	69.5	101.5	1.5	



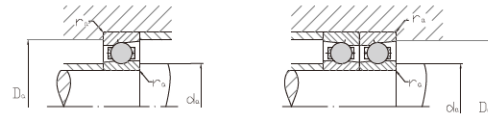
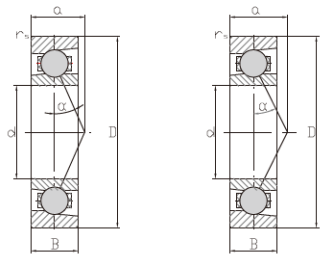
HCB719C, HCB70C, HCB72C  
contact angle  $\alpha = 15^\circ$



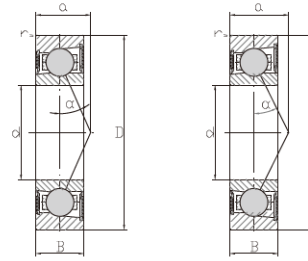
HCB719E, HCB70E, HCB72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(ceramic balls)

Shaft Dimensions			Mass			Load rating			Attainable Speed		Bearing Code	Abutment dimensions		
d mm	D mm	B mm	r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a mm	≈ kg	C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
60	110	22	1.5	1.5	31	0.69	36	29	14000	22000	HCB7212E.T.P4S.UL	69.5	101.5	1.5
60	110	22	1.5	1.5	23	0.69	38	30.5	16000		HCB7212C.2RSD.T.P4S.UL	69.5	101.5	1.5
60	110	22	1.5	1.5	31	0.69	36	29	14000		HCB7212E.2RSD.T.P4S.UL	69.5	101.5	1.5
65	90	13	1	0.3	17	0.17	17	16.6	18000	30000	HCB71913C.T.P4S.UL	70	85.5	0.6
65	90	13	1	0.3	25	0.17	16	15	15000	24000	HCB71913E.T.P4S.UL	70	85.5	0.6
65	90	13	1	0.3	17	0.17	17	16.6	18000		HCB71913C.2RSD.T.P4S.UL	70	85.5	0.6
65	90	13	1	0.3	25	0.17	16	15	15000		HCB71913E.2RSD.T.P4S.UL	70	85.5	0.6
65	100	18	1.1	1.1	20	0.37	27.5	24.5	17000	28000	HCB7013C.T.P4S.UL	72	93	1
65	100	18	1.1	1.1	28	0.37	26	23.6	15000	24000	HCB7013E.T.P4S.UL	72	93	1
65	100	18	1.1	1.1	20	0.37	27.5	24.5	17000		HCB7013C.T.2RSD.T.P4S.UL	72	93	1
65	100	18	1.1	1.1	28	0.37	26	23.6	15000		HCB7013E.T.2RSD.T.P4S.UL	72	93	1
65	120	23	1.5	1.5	24	0.86	46.5	37.5	15000	24000	HCB7213C.T.P4S.UL	75.5	109.5	1.5
65	120	23	1.5	1.5	33	0.86	44	36	13000	20000	HCB7213E.T.P4S.UL	75.5	109.5	1.5
65	120	23	1.5	1.5	24	0.86	46.5	37.5	15000		HCB7213C.2RSD.T.P4S.UL	75.5	109.5	1.5
65	120	23	1.5	1.5	33	0.86	44	36	13000		HCB7213E.2RSD.T.P4S.UL	75.5	109.5	1.5
70	100	16	1	0.3	19	0.28	23.2	22.8	16000	26000	HCB71914C.T.P4S.UL	76	94.5	0.6
70	100	16	1	0.3	28	0.28	22	21.6	14000	22000	HCB71914E.T.P4S.UL	76	94.5	0.6
70	100	16	1	0.3	19	0.28	23.2	22.8	16000		HCB71914C.2RSD.T.P4S.UL	76	94.5	0.6
70	100	16	1	0.3	28	0.28	22	21.6	14000		HCB71914E.2RSD.T.P4S.UL	76	94.5	0.6
70	110	20	1.1	1.1	22	0.52	34	30	16000	26000	HCB7014C.T.P4S.UL	77	102	1
70	110	20	1.1	1.1	31	0.52	32.5	29	13000	20000	HCB7014E.T.P4S.UL	77	102	1
70	110	20	1.1	1.1	22	0.52	34	30	16000		HCB7014C.T.2RSD.T.P4S.UL	77	102	1
70	110	20	1.1	1.1	31	0.52	32.5	29	13000		HCB7014E.T.2RSD.T.P4S.UL	77	102	1
70	125	24	1.5	1.5	25	0.95	48	40.5	14000	22000	HCB7214C.T.P4S.UL	80	115	1.5
70	125	24	1.5	1.5	35	0.95	45.5	39	12000	19000	HCB7214E.T.P4S.UL	80	115	1.5
70	125	24	1.5	1.5	25	0.95	48	40.5	14000		HCB7214C.2RSD.T.P4S.UL	80	115	1.5
70	125	24	1.5	1.5	35	0.95	45.5	39	12000		HCB7214E.2RSD.T.P4S.UL	80	115	1.5
75	105	16	1	0.3	20	0.3	23.6	24	16000	26000	HCB71915C.T.P4S.UL	81	99	0.6
75	105	16	1	0.3	29	0.3	22	22.8	13000	20000	HCB71915E.T.P4S.UL	81	99	0.6
75	105	16	1	0.3	20	0.3	23.6	24	16000		HCB71915C.2RSD.T.P4S.UL	81	99	0.6
75	105	16	1	0.3	29	0.3	22	22.8	13000		HCB71915E.2RSD.T.P4S.UL	81	99	0.6



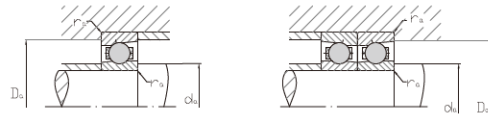
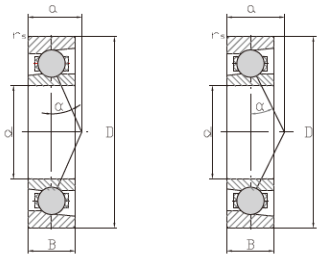
HCB719C, HCB70C, HCB72C  
contact angle  $\alpha = 15^\circ$



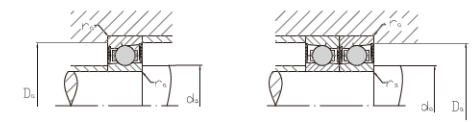
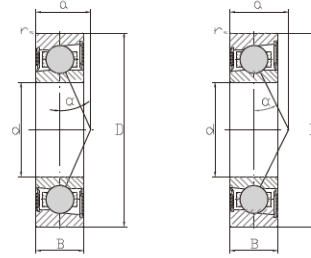
HCB719E, HCB70E, HCB72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(ceramic balls)

Shaft	Dimensions					Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions			
	d mm	D mm	B mm	r <sub>sm</sub> mm	r <sub>1sm</sub> mm		a mm	C <sub>r</sub> kN	C <sub>0r</sub> kN	Grease min <sup>-1</sup>		Oil Throwaway	da h12 mm	Da H12 mm	r <sub>amax</sub> mm
	75	115	20	1.1	1.1	23	0.55	35.5	32.5	15000	24000	HCB7015C.T.P4S.UL	82	107	1
	75	115	20	1.1	1.1	32	0.55	33.5	30.5	13000	20000	HCB7015E.T.P4S.UL	82	107	1
	75	115	20	1.1	1.1	23	0.55	35.5	32.5	15000		HCB7015C.T.2RSD.T.P4S.UL	82	107	1
	75	115	20	1.1	1.1	32	0.55	33.5	30.5	13000		HCB7015E.T.2RSD.T.P4S.UL	82	107	1
	75	130	25	1.5	1.5	26	1.05	50	44	14000	22000	HCB7215C.T.P4S.UL	85	120	1.5
	75	130	25	1.5	1.5	36	1.05	47.5	41.5	12000	19000	HCB7215E.T.P4S.UL	85	120	1.5
	75	130	25	1.5	1.5	26	1.05	50	44	14000		HCB7215C.2RSD.T.P4S.UL	85	120	1.5
	75	130	25	1.5	1.5	36	1.05	47.5	41.5	12000		HCB7215E.2RSD.T.P4S.UL	85	120	1.5
80	80	110	16	1	0.3	21	0.31	24	25	15000	24000	HCB71916C.T.P4S.UL	86	104	0.6
	80	110	16	1	0.3	30	0.31	22.4	23.6	13000	20000	HCB71916E.T.P4S.UL	86	104	0.6
	80	110	16	1	0.3	21	0.31	24	25	15000		HCB71916C.2RSD.T.P4S.UL	86	104	0.6
	80	110	16	1	0.3	30	0.31	22.4	23.6	13000		HCB71916E.2RSD.T.P4S.UL	86	104	0.6
	80	125	22	1.1	1.1	25	0.73	44	40.5	14000	22000	HCB7016C.T.P4S.UL	88	117	1
	80	125	22	1.1	1.1	35	0.73	41.5	39	12000	19000	HCB7016E.T.P4S.UL	88	117	1
	80	125	22	1.1	1.1	25	0.73	44	40.5	14000		HCB7016C.T.2RSD.T.P4S.UL	88	117	1
	80	125	22	1.1	1.1	35	0.73	41.5	39	12000		HCB7016E.T.2RSD.T.P4S.UL	88	117	1
85	85	120	18	1	0.3	23	0.44	31	32.5	14000	22000	HCB71917C.T.P4S.UL	92	114	0.6
	85	120	18	1	0.3	33	0.44	29	30.5	12000	19000	HCB71917E.T.P4S.UL	92	114	0.6
	85	120	18	1	0.3	23	0.44	31	32.5	14000		HCB71917C.2RSD.T.P4S.UL	92	114	0.6
	85	120	18	1	0.3	33	0.44	29	30.5	12000		HCB71917E.2RSD.T.P4S.UL	92	114	0.6
	85	130	22	1.1	1.1	25	0.77	45	43	13000	20000	HCB7017C.T.P4S.UL	93	122	1
	85	130	22	1.1	1.1	36	0.77	42.5	40.5	11000	18000	HCB7017E.T.P4S.UL	93	122	1
	85	130	22	1.1	1.1	25	0.77	45	43	13000		HCB7017C.T.2RSD.T.P4S.UL	93	122	1
	85	130	22	1.1	1.1	36	0.77	42.5	40.5	11000		HCB7017E.T.2RSD.T.P4S.UL	93	122	1
90	90	125	18	1.1	0.6	23	0.46	31.5	34	13000	20000	HCB71918C.T.P4S.UL	97	119	0.6
	90	125	18	1.1	0.6	34	0.46	30	32	11000	18000	HCB71918E.T.P4S.UL	97	119	0.6
	90	125	18	1.1	0.6	23	0.46	31.5	34	13000		HCB71918C.2RSD.T.P4S.UL	97	119	0.6
	90	125	18	1.1	0.6	34	0.46	30	32	11000		HCB71918E.2RSD.T.P4S.UL	97	119	0.6
	90	140	24	1.5	1.5	27	1	53	50	12000	19000	HCB7018C.T.P4S.UL	100	131	1.5
	90	140	24	1.5	1.5	39	1	50	47.5	10000	17000	HCB7018E.T.P4S.UL	100	131	1.5
	90	140	24	1.5	1.5	27	1	53	50	12000		HCB7018C.T.2RSD.T.P4S.UL	100	131	1.5



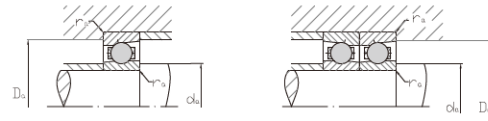
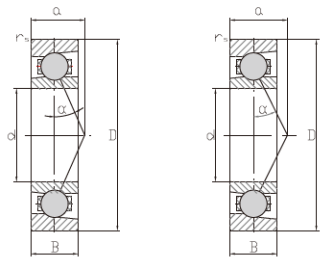
HCB719C, HCB70C, HCB72C  
contact angle  $\alpha = 15^\circ$



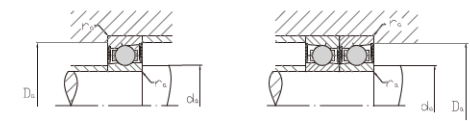
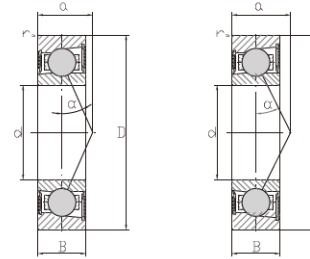
HCB719E, HCB70E, HCB72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(ceramic balls)

Shaft Dimensions			Mass		Load rating		Attainable Speed		Bearing Code	Abutment dimensions					
d mm	D mm	B mm	r <sub>smin</sub> mm	r <sub>1smin</sub> mm	a mm	≈ kg	C <sub>r</sub> kN	C <sub>0r</sub> kN		Grease min <sup>-1</sup>	Oil Throwaway	da h12 mm	Da H12 mm	r <sub>amax</sub> mm	
90	140	24	1.5	1.5	39	1	50	47.5	10000		HCB7018E.T.2RSD.T.P4S.UL	100	131	1.5	
95	95	130	18	1.1	0.6	24	0.5	32	35.5	12000	19000	HCB71919C.T.P4S.UL	102	124	0.6
	95	130	18	1.1	0.6	35	0.5	30.5	33.5	10000	17000	HCB71919E.T.P4S.UL	102	124	0.6
	95	130	18	1.1	0.6	24	0.5	32	35.5	12000		HCB71919C.2RSD.T.P4S.UL	102	124	0.6
	95	130	18	1.1	0.6	35	0.5	30.5	33.5	10000		HCB71919E.2RSD.T.P4S.UL	102	124	0.6
95	145	24	1.5	1.5	28	1	54	53	11000	18000	HCB7019C.T.P4S.UL	105	136	1.5	
	95	145	24	1.5	1.5	40	1	51	51	9500	16000	HCB7019E.T.P4S.UL	105	136	1.5
	95	145	24	1.5	1.5	28	1	54	53	11000		HCB7019C.T.2RSD.T.P4S.UL	105	136	1.5
	95	145	24	1.5	1.5	40	1	51	51	9500		HCB7019E.T.2RSD.T.P4S.UL	105	136	1.5
100	100	140	20	1.1	0.6	26	0.66	40.5	44	11000	18000	HCB71920C.T.P4S.UL	107	133	0.6
	100	140	20	1.1	0.6	38	0.66	38	42.5	9500	16000	HCB71920E.T.P4S.UL	107	133	0.6
	100	140	20	1.1	0.6	26	0.66	40.5	44	11000		HCB71920C.2RSD.T.P4S.UL	107	133	0.6
	100	140	20	1.1	0.6	38	0.66	38	42.5	9500		HCB71920E.2RSD.T.P4S.UL	107	133	0.6
100	150	24	1.5	1.5	29	1.08	56	56	11000	18000	HCB7020C.T.P4S.UL	110	141	1.5	
	100	150	24	1.5	1.5	41	1.08	53	53	9000	15000	HCB7020E.T.P4S.UL	110	141	1.5
	100	150	24	1.5	1.5	29	1.08	56	56	11000		HCB7020C.T.2RSD.T.P4S.UL	110	141	1.5
	100	150	24	1.5	1.5	41	1.08	53	53	9000		HCB7020E.T.2RSD.T.P4S.UL	110	141	1.5
105	105	145	20	1.1	0.6	27	0.7	40	45	11000	18000	HCB71921C.T.P4S.UL	112	138	0.6
	105	145	20	1.1	0.6	39	0.7	38	42.5	9000	15000	HCB71921E.T.P4S.UL	112	138	0.6
	105	145	20	1.1	0.6	27	0.7	40	45	11000		HCB71921C.2RSD.T.P4S.UL	112	138	0.6
	105	145	20	1.1	0.6	39	0.7	38	42.5	9000		HCB71921E.2RSD.T.P4S.UL	112	138	0.6
105	160	26	2	2	31	1.44	57	60	10000	16000	HCB7021C.T.P4S.UL	116	150	2	
	105	160	26	2	2	44	1.44	54	57	8500	14000	HCB7021E.T.P4S.UL	116	150	2
	105	160	26	2	2	31	1.44	57	60	10000		HCB7021C.T.2RSD.T.P4S.UL	116	150	2
	105	160	26	2	2	44	1.44	54	57	8500		HCB7021E.T.2RSD.T.P4S.UL	116	150	2
110	110	150	20	1.1	0.6	27	0.72	40.5	46.5	10000	17000	HCB71922C.T.P4S.UL	117	143	0.6
	110	150	20	1.1	0.6	40	0.72	39	44	9000	15000	HCB71922E.T.P4S.UL	117	143	0.6
	110	150	20	1.1	0.6	27	0.72	40.5	46.5	10000		HCB71922C.2RSD.T.P4S.UL	117	143	0.6
	110	150	20	1.1	0.6	40	0.72	39	44	9000		HCB71922E.2RSD.T.P4S.UL	117	143	0.6
110	170	28	2	2	33	1.69	75	76.5	9500	16000	HCB7022C.T.P4S.UL	121	159	2	



HCB719C, HCB70C, HCB72C  
contact angle  $\alpha = 15^\circ$



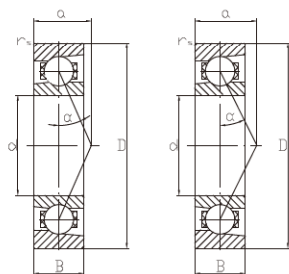
HCB719E, HCB70E, HCB72E  
contact angle  $\alpha = 25^\circ$

Single Row Angular Contact Ball Bearings(ceramic balls)

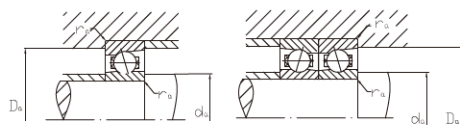
Shaft Dimensions		Dimensions					Mass	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
d	D	B	r <sub>sm</sub>	r <sub>1sm</sub>	a	kg	C <sub>r</sub>	C <sub>0r</sub>	Grease	Oil		da h12	Da H12	r <sub>amax</sub>	
mm	mm	mm	mm	mm	mm		kN	kN	min <sup>-1</sup>	Throwaway		mm	mm	mm	
110	170	28	2	2	47	1.69	72	72	8000	13000	HCB7022E.T.P4S.UL	121	159	2	
110	170	28	2	2	33	1.69	75	76.5	9500		HCB7022C.T.2RSD.T.P4S.UL	121	159	2	
110	170	28	2	2	47	1.69	72	72	8000		HCB7022E.T.2RSD.T.P4S.UL	121	159	2	
120	120	165	22	1.1	0.6	30	1	51	9000	15000	HCB71924C.T.P4S.UL	128	157	0.6	
120	120	165	22	1.1	0.6	44	1	48	8000	13000	HCB71924E.T.P4S.UL	128	157	0.6	
120	120	165	22	1.1	0.6	30	1	51	9000		HCB71924C.2RSD.T.P4S.UL	128	157	0.6	
120	120	165	22	1.1	0.6	44	1	48	8000		HCB71924E.2RSD.T.P4S.UL	128	157	0.6	
120	180	28	2	2	34	1.8	78	81.5	8500	14000	HCB7024C.T.P4S.UL	131	169	2	
120	180	28	2	2	49	1.8	73.5	76.5	7500	12000	HCB7024E.T.P4S.UL	131	169	2	
120	180	28	2	2	34	1.8	78	81.5	8500		HCB7024C.T.2RSD.T.P4S.UL	131	169	2	
120	180	28	2	2	49	1.8	73.5	76.5	7500		HCB7024E.T.2RSD.T.P4S.UL	131	169	2	
130	130	180	24	1.5	0.6	33	1.34	60	8500	14000	HCB71926C.T.P4S.UL	139	171	0.6	
130	130	180	24	1.5	0.6	48	1.34	45.5	7000	11000	HCB71926E.T.P4S.UL	139	171	0.6	
130	130	180	24	1.5	0.6	33	1.34	60	8500		HCB71926C.2RSD.T.P4S.UL	139	171	0.6	
130	130	180	24	1.5	0.6	48	1.34	45.5	7000		HCB71926E.2RSD.T.P4S.UL	139	171	0.6	
130	200	33	2	2	39	2.62	100	104	7500	12000	HCB7026C.T.P4S.UL	142	189	2	
130	200	33	2	2	55	2.62	95	98	6700	10000	HCB7026E.T.P4S.UL	142	189	2	
130	200	33	2	2	39	2.62	100	104	7500		HCB7026C.T.2RSD.T.P4S.UL	142	189	2	
130	200	33	2	2	55	2.62	95	98	6700		HCB7026E.T.2RSD.T.P4S.UL	142	189	2	
140	140	190	24	1.5	0.6	34	1.42	62	7500	12000	HCB71928C.T.P4S.UL	149	181	0.6	
140	140	190	24	1.5	0.6	51	1.42	47.5	6700	10000	HCB71928E.T.P4S.UL	149	181	0.6	
140	140	190	24	1.5	0.6	34	1.42	62	7500		HCB71928C.2RSD.T.P4S.UL	149	181	0.6	
140	140	190	24	1.5	0.6	51	1.42	47.5	6700		HCB71928E.2RSD.T.P4S.UL	149	181	0.6	
140	210	33	2	2	40	2.9	102	110	7000	11000	HCB7028C.T.P4S.UL	152	199	2	
140	210	33	2	2	57	2.9	96.5	104	6300	9500	HCB7028E.T.P4S.UL	152	199	2	
140	210	33	2	2	40	2.9	102	110	7000		HCB7028C.T.2RSD.T.P4S.UL	152	199	2	
140	210	33	2	2	57	2.9	96.5	104	6300		HCB7028E.T.2RSD.T.P4S.UL	152	199	2	

HCB7..C adjusted, in pairs or sets, contact angle  $\alpha = 15^\circ$  , with ceramic balls, restricted tolerances  
 HCB7..E adjusted, in pairs or sets, contact angle  $\alpha = 25^\circ$  , with ceramic balls, restricted tolerances

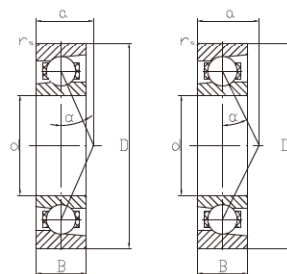
HCS7..C.2RSD adjusted, in pairs or sets, contact angle  $\alpha = 15^\circ$  , with ceramic balls, lip seals on both sides,non-contact, restricted tolerances  
 HCS7..E.2RSD adjusted, in pairs or sets, contact angle  $\alpha = 25^\circ$  , with ceramic balls, lip seals on both sides,non-contact, restricted tolerances



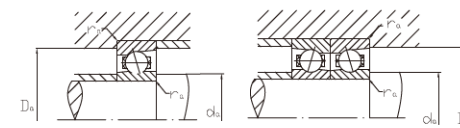
HS719C, HSS719C  
contact angle  $\alpha = 15^\circ$



HS719E, HSS719E  
contact angle  $\alpha = 25^\circ$



HS719C, HSS719C  
contact angle  $\alpha = 15^\circ$

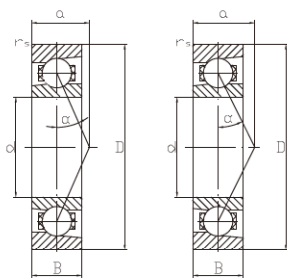


HS719E, HSS719E  
contact angle  $\alpha = 25^\circ$

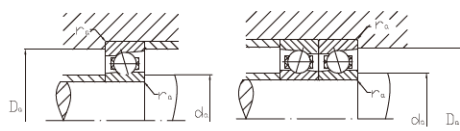
## Single row angular contact ball bearings(steel balls)

Shaft	Dimensions					Mass $\approx$ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm	r <sub>smin</sub> mm	a mm		C <sub>r</sub> kN	C <sub>or</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
10	10	22	6	0.3	5	0.01	1.9	1.1	90000	150000	HS71900C.T.P4S.UL	13.5	18	0.3
	10	22	6	0.3	7	0.01	1.8	1	75000	120000	HS71900E.T.P4S.UL	13.5	18	0.3
	10	22	6	0.3	5	0.01	1.96	1.1	90000		HSS71900C.T.P4S.UL	13.5	18	0.3
	10	22	6	0.3	7	0.01	1.8	1	75000		HSS71900E.T.P4S.UL	13.5	18	0.3
	10	26	8	0.3	6	0.02	2.75	1.6	80000	130000	HS7000C.T.P4S.UL	15	20.5	0.3
	10	26	8	0.3	8	0.02	2.6	1.5	67000	100000	HS7000E.T.P4S.UL	15	20.5	0.3
	10	26	8	0.3	6	0.02	2.75	1.6	80000		HSS7000C.T.P4S.UL	15	20.5	0.3
	10	26	8	0.3	8	0.02	2.6	1.5	67000		HSS7000E.T.P4S.UL	15	20.5	0.3
12	12	24	6	0.3	5	0.01	2.04	1.2	80000	130000	HS71901C.T.P4S.UL	15.5	20	0.3
	12	24	6	0.3	7	0.01	1.93	1.14	67000	100000	HS71901E.T.P4S.UL	15.5	20	0.3
	12	24	6	0.3	5	0.01	2.04	1.2	80000		HSS71901C.T.P4S.UL	15.5	20	0.3
	12	24	6	0.3	7	0.01	1.93	1.14	67000		HSS71901E.T.P4S.UL	15.5	20	0.3
	12	28	8	0.3	7	0.02	2.7	1.63	70000	110000	HS7001C.T.P4S.UL	17	22.5	0.3
	12	28	8	0.3	9	0.02	2.55	1.53	60000	90000	HS7001E.T.P4S.UL	17	22.5	0.3
	12	28	8	0.3	7	0.02	2.7	1.63	70000		HSS7001C.T.P4S.UL	17	22.5	0.3
	12	28	8	0.3	9	0.02	2.55	1.53	60000		HSS7001E.T.P4S.UL	17	22.5	0.3
15	15	28	7	0.3	6	0.01	2.8	1.76	67000	100000	HS71902C.T.P4S.UL	18.5	24	0.3
	15	28	7	0.3	9	0.01	2.65	1.66	56000	85000	HS71902E.T.P4S.UL	18.5	24	0.3
	15	28	7	0.3	6	0.01	2.8	1.76	67000		HSS71902C.T.P4S.UL	18.5	24	0.3
	15	28	7	0.3	9	0.01	2.65	1.66	56000		HSS71902E.T.P4S.UL	18.5	24	0.3
	15	32	9	0.3	8	0.03	3.75	2.45	60000	90000	HS7002C.T.P4S.UL	20	26.5	0.3
	15	32	9	0.3	10	0.03	3.55	2.32	50000	75000	HS7002E.T.P4S.UL	20	26.5	0.3
	15	32	9	0.3	8	0.03	3.75	2.45	60000		HSS7002C.T.P4S.UL	20	26.5	0.3
	15	32	9	0.3	10	0.03	3.55	2.32	50000		HSS7002E.T.P4S.UL	20	26.5	0.3
17	17	30	7	0.3	7	0.02	2.9	1.9	60000	90000	HS71903C.T.P4S.UL	20.5	26	0.3
	17	30	7	0.3	9	0.02	2.7	1.8	50000	75000	HS71903E.T.P4S.UL	20.5	26	0.3
	17	30	7	0.3	7	0.02	2.9	1.9	60000		HSS71903C.T.P4S.UL	20.5	26	0.3
	17	30	7	0.3	9	0.02	2.7	1.8	50000		HSS71903E.T.P4S.UL	20.5	26	0.3
	17	35	10	0.3	9	0.04	3.8	2.65	53000	80000	HS7003C.T.P4S.UL	22.5	29	0.3
	17	35	10	0.3	11	0.04	3.65	2.5	45000	67000	HS7003E.T.P4S.UL	22.5	29	0.3
	17	35	10	0.3	9	0.04	3.8	2.65	53000		HSS7003C.T.P4S.UL	22.5	29	0.3

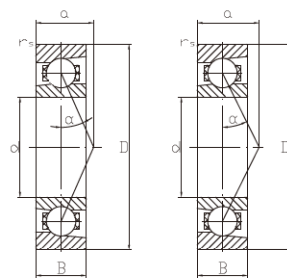




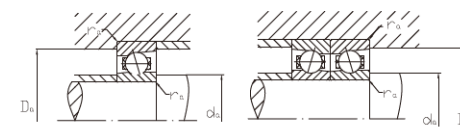
HS719C, HSS719C  
contact angle  $\alpha = 15^\circ$



HS719E, HSS719E  
contact angle  $\alpha = 25^\circ$



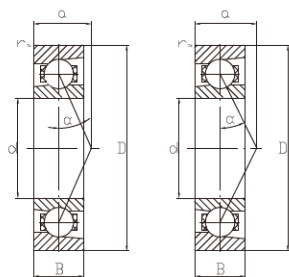
HS719C, HSS719C  
contact angle  $\alpha = 15^\circ$



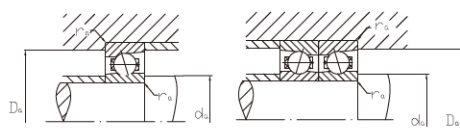
HS719E, HSS719E  
contact angle  $\alpha = 25^\circ$

## Single row angular contact ball bearings(steel balls)

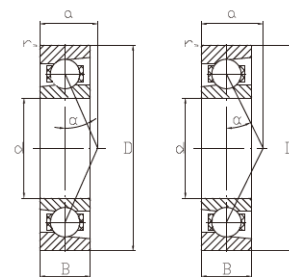
Shaft	Dimensions			r <sub>smin</sub> mm	a mm	Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm				C <sub>r</sub> kN	C <sub>or</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
	17	35	10	0.3	11	0.04	3.65	2.5	45000		HSS7003E.T.P4S.UL	22.5	29	0.3
20	20	37	9	0.3	8	0.04	3.9	2.85	50000	75000	HS71904C.T.P4S.UL	25	31.5	0.3
	20	37	9	0.3	11	0.04	3.75	2.7	43000	63000	HS71904E.T.P4S.UL	25	31.5	0.3
	20	37	9	0.3	8	0.04	3.9	2.85	50000		HSS71904C.T.P4S.UL	25	31.5	0.3
	20	37	9	0.3	11	0.04	3.75	2.7	43000		HSS71904E.T.P4S.UL	25	31.5	0.3
20	20	42	12	0.6	10	0.07	6.2	4.55	45000	67000	HS7004C.T.P4S.UL	27	34.5	0.6
	20	42	12	0.6	13	0.07	5.85	4.3	38000	56000	HS7004E.T.P4S.UL	27	34.5	0.6
	20	42	12	0.6	10	0.07	6.2	4.55	45000		HSS7004C.T.P4S.UL	27	34.5	0.6
	20	42	12	0.6	13	0.07	5.85	4.3	38000		HSS7004E.T.P4S.UL	27	34.5	0.6
25	25	42	9	0.3	9	0.05	4.25	3.35	43000	63000	HS71905C.T.P4S.UL	30	36.5	0.3
	25	42	9	0.3	12	0.05	4	3.15	36000	53000	HS71905E.T.P4S.UL	30	36.5	0.3
	25	42	9	0.3	9	0.05	4.25	3.35	43000		HSS71905C.T.P4S.UL	30	36.5	0.3
	25	42	9	0.3	12	0.05	4	3.15	36000		HSS71905E.T.P4S.UL	30	36.5	0.3
25	25	47	12	0.6	11	0.08	6.3	4.9	38000	56000	HS7005C.T.P4S.UL	32	34.5	0.6
	25	47	12	0.6	14	0.08	6	4.65	34000	50000	HS7005E.T.P4S.UL	32	34.5	0.6
	25	47	12	0.6	11	0.08	6.3	4.9	38000		HSS7005C.T.P4S.UL	32	34.5	0.6
	25	47	12	0.6	14	0.08	6	4.65	34000		HSS7005E.T.P4S.UL	32	34.5	0.6
30	30	47	9	0.3	10	0.05	6.4	5.2	36000	53000	HS71906C.T.P4S.UL	34.5	42	0.3
	30	47	9	0.3	14	0.05	6	4.9	32000	48000	HS71906E.T.P4S.UL	34.5	42	0.3
	30	47	9	0.3	10	0.05	6.4	5.2	36000		HSS71906C.T.P4S.UL	34.5	42	0.3
	30	47	9	0.3	14	0.05	6	4.9	32000		HSS71906E.T.P4S.UL	34.5	42	0.3
30	30	55	13	1	12	0.12	8.8	7.1	32000	48000	HS7006C.T.P4S.UL	37.5	47	1
	30	55	13	1	16	0.12	8.3	6.7	28000	43000	HS7006E.T.P4S.UL	37.5	47	1
	30	55	13	1	12	0.12	8.8	7.1	32000		HSS7006C.T.P4S.UL	37.5	47	1
	30	55	13	1	16	0.12	8.3	6.7	28000		HSS7006E.T.P4S.UL	37.5	47	1
35	35	55	10	0.6	11	0.08	6.95	6.2	32000	48000	HS71907C.T.P4S.UL	41	48.5	0.6
	35	55	10	0.6	16	0.08	6.55	5.85	26000	40000	HS71907E.T.P4S.UL	41	48.5	0.6
	35	55	10	0.6	11	0.08	6.95	6.2	32000		HSS71907C.T.P4S.UL	41	48.5	0.6
	35	55	10	0.6	16	0.08	6.55	5.85	26000		HSS71907E.T.P4S.UL	41	48.5	0.6
35	62	14	1	14	0.16	9.3	8.3	28000	43000	HS7007C.T.P4S.UL	43.5	53	1	



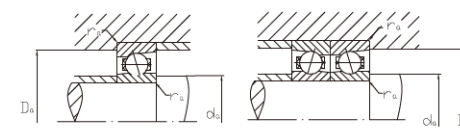
HS719C, HSS719C  
contact angle  $\alpha = 15^\circ$



HS719E, HSS719E  
contact angle  $\alpha = 25^\circ$



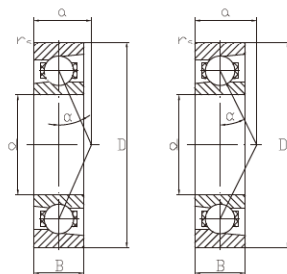
HS719C, HSS719C  
contact angle  $\alpha = 15^\circ$



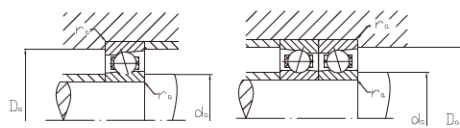
HS719E, HSS719E  
contact angle  $\alpha = 25^\circ$

## Single row angular contact ball bearings(steel balls)

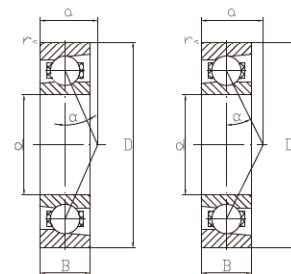
Shaft	Dimensions					Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm	r <sub>smin</sub> mm	a mm		C <sub>r</sub> kN	C <sub>or</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
35	62	14	1	18	0.16	8.8	7.8	24000	38000	HS7007E.T.P4S.UL	43.5	53	1	
	62	14	1	14	0.16	9.3	8.3	28000		HSS7007C.T.P4S.UL	43.5	53	1	
	62	14	1	18	0.16	8.8	7.8	24000		HSS7007E.T.P4S.UL	43.5	53	1	
40	62	12	0.6	13	0.12	7.2	6.95	28000	43000	HS71908C.T.P4S.UL	47	54.5	0.6	
	62	12	0.6	18	0.12	6.8	6.4	24000	38000	HS71908E.T.P4S.UL	47	54.5	0.6	
	62	12	0.6	13	0.12	7.2	6.95	28000		HSS71908C.T.P4S.UL	47	54.5	0.6	
	62	12	0.6	18	0.12	6.8	6.4	24000		HSS71908E.T.P4S.UL	47	54.5	0.6	
40	68	15	1	15	0.21	10	9.3	26000	40000	HS7008C.T.P4S.UL	49	58.5	1	
	68	15	1	20	0.21	9.3	8.65	22000	36000	HS7008E.T.P4S.UL	49	58.5	1	
	68	15	1	15	0.21	10	9.3	26000		HSS7008C.T.P4S.UL	49	58.5	1	
	68	15	1	20	0.21	9.3	8.65	22000		HSS7008E.T.P4S.UL	49	58.5	1	
45	68	12	0.6	14	0.13	10	9.65	24000	38000	HS71909C.T.P4S.UL	51.5	61	0.6	
	68	12	0.6	19	0.13	9.5	9	22000	36000	HS71909E.T.P4S.UL	51.5	61	0.6	
	68	12	0.6	14	0.13	10	9.65	24000		HSS71909C.T.P4S.UL	51.5	61	0.6	
	68	12	0.6	19	0.13	9.5	9	22000		HSS71909E.T.P4S.UL	51.5	61	0.6	
45	75	16	1	16	0.27	12.9	12.2	24000	38000	HS7009C.T.P4S.UL	54	65.5	1	
	75	16	1	22	0.27	12.2	11.4	20000	34000	HS7009E.T.P4S.UL	54	65.5	1	
	75	16	1	16	0.27	12.9	12.2	24000		HSS7009C.T.P4S.UL	54	65.5	1	
	75	16	1	22	0.27	12.2	11.4	20000		HSS7009E.T.P4S.UL	54	65.5	1	
50	72	12	0.6	14	0.13	10.4	10.2	22000	36000	HS71910C.T.P4S.UL	56	65.5	0.6	
	72	12	0.6	20	0.13	9.8	9.65	20000	34000	HS71910E.T.P4S.UL	56	65.5	0.6	
	72	12	0.6	14	0.13	10.4	10.2	22000		HSS71910C.T.P4S.UL	56	65.5	0.6	
	72	12	0.6	20	0.13	9.8	9.65	20000		HSS71910E.T.P4S.UL	56	65.5	0.6	
50	80	16	1	17	0.3	13.4	13.2	22000	36000	HS7010C.T.P4S.UL	59	70.5	1	
	80	16	1	23	0.29	12.5	12.2	18000	30000	HS7010E.T.P4S.UL	59	70.5	1	
	80	16	1	17	0.3	13.4	13.2	22000		HSS7010C.T.P4S.UL	59	70.5	1	
	80	16	1	23	0.29	12.5	12.2	18000		HSS7010E.T.P4S.UL	59	70.5	1	
55	80	13	1	16	0.2	13.4	13.7	20000	34000	HS71911C.T.P4S.UL	61.5	73	0.6	
	80	13	1	22	0.2	12.7	12.7	18000	30000	HS71911E.T.P4S.UL	61.5	73	0.6	
	80	13	1	16	0.2	13.4	13.7	20000		HSS71911C.T.P4S.UL	61.5	73	0.6	
	80	13	1	22	0.2	12.7	12.7	18000		HSS71911E.T.P4S.UL	61.5	73	0.6	



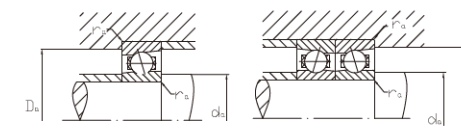
HS719C, HSS719C  
contact angle  $\alpha = 15^\circ$



HS719E, HSS719E  
contact angle  $\alpha = 25^\circ$



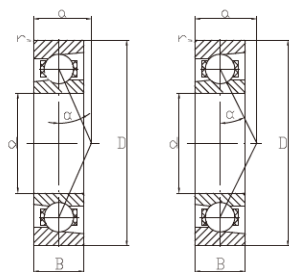
HS719C, HSS719C  
contact angle  $\alpha = 15^\circ$



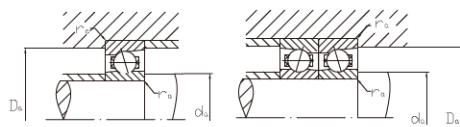
HS719E, HSS719E  
contact angle  $\alpha = 25^\circ$

## Single row angular contact ball bearings(steel balls)

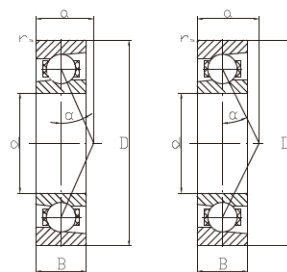
Shaft	Dimensions					Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm	r <sub>smin</sub> mm	a mm		C <sub>r</sub> kN	C <sub>or</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
55	55	90	18	1.1	19	0.41	18.6	19	19000	32000	HS7011C.T.P4S.UL	65.5	79	1
	55	90	18	1.1	26	0.41	17.6	17.6	17000	28000	HS7011E.T.P4S.UL	65.5	79	1
	55	90	18	1.1	19	0.41	18.6	19	19000		HSS7011C.T.P4S.UL	65.5	79	1
	55	90	18	1.1	26	0.41	17.6	17.6	17000		HSS7011E.T.P4S.UL	65.5	79	1
60	60	85	13	1	16	0.22	14	14.6	19000	32000	HS71912C.T.P4S.UL	66.5	78	0.6
	60	85	13	1	23	0.22	13.2	13.4	17000	28000	HS71912E.T.P4S.UL	66.5	78	0.6
	60	85	13	1	16	0.22	14	14.6	19000		HSS71912C.T.P4S.UL	66.5	78	0.6
	60	85	13	1	23	0.22	13.2	13.4	17000		HSS71912E.T.P4S.UL	66.5	78	0.6
60	60	95	18	1.1	19	0.45	19.3	20	18000	30000	HS7012C.T.P4S.UL	70.5	84	1
	60	95	18	1.1	27	0.45	18.3	19	15000	24000	HS7012E.T.P4S.UL	70.5	84	1
	60	95	18	1.1	19	0.45	19.3	20	18000		HSS7012C.T.P4S.UL	70.5	84	1
	60	95	18	1.1	27	0.45	18.3	19	15000		HSS7012E.T.P4S.UL	70.5	84	1
65	65	90	13	1	17	0.23	14.3	15.3	18000	30000	HS71913C.T.P4S.UL	71.5	83	0.6
	65	90	13	1	25	0.23	13.4	14.3	15000	24000	HS71913E.T.P4S.UL	71.5	83	0.6
	65	90	13	1	17	0.23	14.3	15.3	18000		HSS71913C.T.P4S.UL	71.5	83	0.6
	65	90	13	1	25	0.23	13.4	14.3	15000		HSS71913E.T.P4S.UL	71.5	83	0.6
65	65	100	18	1.1	20	0.47	20	21.6	17000	28000	HS7013C.T.P4S.UL	75.5	89	1
	65	100	18	1.1	28	0.47	19	20	15000	24000	HS7013E.T.P4S.UL	75.5	89	1
	65	100	18	1.1	20	0.47	20	21.6	17000		HSS7013C.T.P4S.UL	75.5	89	1
	65	100	18	1.1	28	0.47	19	20	15000		HSS7013E.T.P4S.UL	75.5	89	1
70	70	100	16	1	19	0.35	18.3	20	16000	26000	HS71914C.T.P4S.UL	78.5	91	0.6
	70	100	16	1	28	0.35	17.3	18.6	14000	22000	HS71914E.T.P4S.UL	78.5	91	0.6
	70	100	16	1	19	0.35	18.3	20	16000		HSS71914C.T.P4S.UL	78.5	91	0.6
	70	100	16	1	28	0.35	17.3	18.6	14000		HSS71914E.T.P4S.UL	78.5	91	0.6
70	70	110	20	1.1	22	0.64	26	28	16000	26000	HS7014C.T.P4S.UL	82	97.5	1
	70	110	20	1.1	31	0.64	24.5	26	13000	20000	HS7014E.T.P4S.UL	82	97.5	1
	70	110	20	1.1	22	0.64	26	28	16000		HSS7014C.T.P4S.UL	82	97.5	1
	70	110	20	1.1	31	0.64	24.5	26	13000		HSS7014E.T.P4S.UL	82	97.5	1
75	75	105	16	1	20	0.38	19	21.2	16000	26000	HS71915C.T.P4S.UL	83.5	96	0.6
	75	105	16	1	29	0.38	17.6	20	13000	20000	HS71915E.T.P4S.UL	83.5	96	0.6
	75	105	16	1	20	0.38	19	21.2	16000		HSS71915C.T.P4S.UL	83.5	96	0.6



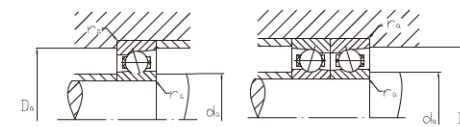
HS719C, HSS719C  
contact angle  $\alpha = 15^\circ$



HS719E, HSS719E  
contact angle  $\alpha = 25^\circ$



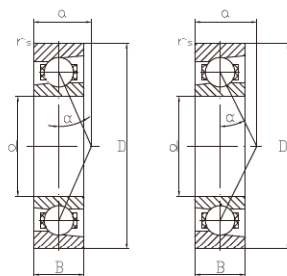
HS719C, HSS719C  
contact angle  $\alpha = 15^\circ$



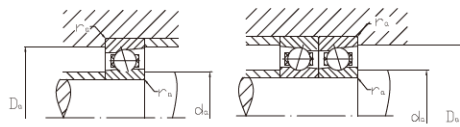
HS719E, HSS719E  
contact angle  $\alpha = 25^\circ$

## Single row angular contact ball bearings(steel balls)

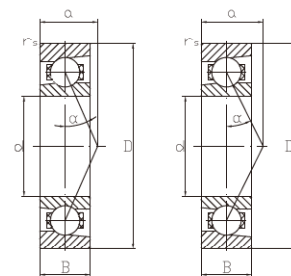
Shaft	Dimensions					Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm	r <sub>smin</sub> mm	a mm		C <sub>r</sub> kN	C <sub>or</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
	75	105	16	1	29	0.38	17.6	20	13000		HSS71915E.T.P4S.UL	83.5	96	0.6
	75	115	20	1.1	23	0.68	26.5	29	15000	24000	HS7015C.T.P4S.UL	87	102.5	1
	75	115	20	1.1	32	0.68	25	27	13000	20000	HS7015E.T.P4S.UL	87	102.5	1
	75	115	20	1.1	23	0.68	26.5	29	15000		HSS7015C.T.P4S.UL	87	102.5	1
	75	115	20	1.1	32	0.68	25	27	13000		HSS7015E.T.P4S.UL	87	102.5	1
80	80	110	16	1	21	0.39	21.2	24	15000	24000	HS71916C.T.P4S.UL	88	101.5	0.6
	80	110	16	1	30	0.39	19.6	22.4	13000	20000	HS71916E.T.P4S.UL	88	101.5	0.6
	80	110	16	1	21	0.39	21.2	24	15000		HSS71916C.T.P4S.UL	88	101.5	0.6
	80	110	16	1	30	0.39	19.6	22.4	13000		HSS71916E.T.P4S.UL	88	101.5	0.6
	80	125	22	1.1	25	0.93	31.5	34.5	14000	22000	HS7016C.T.P4S.UL	93.5	111	1
	80	125	22	1.1	35	0.93	30	32.5	12000	19000	HS7016E.T.P4S.UL	93.5	111	1
	80	125	22	1.1	25	0.93	31.5	34.5	14000		HSS7016C.T.P4S.UL	93.5	111	1
	80	125	22	1.1	35	0.93	30	32.5	12000		HSS7016E.T.P4S.UL	93.5	111	1
85	85	120	18	1.1	23	0.58	22	26	14000	22000	HS71917C.T.P4S.UL	95.5	109	0.6
	85	120	18	1.1	33	0.58	20.4	24.5	12000	19000	HS71917E.T.P4S.UL	95.5	109	0.6
	85	120	18	1.1	23	0.58	22	26	14000		HSS71917C.T.P4S.UL	95.5	109	0.6
	85	120	18	1.1	33	0.58	20.4	24.5	12000		HSS71917E.T.P4S.UL	95.5	109	0.6
	85	130	22	1.1	25	0.97	32	36	13000	20000	HS7017C.T.P4S.UL	98.5	116	1
	85	130	22	1.1	36	0.97	30	33.5	11000	18000	HS7017E.T.P4S.UL	98.5	116	1
	85	130	22	1.1	25	0.97	32	36	13000		HSS7017C.T.P4S.UL	98.5	116	1
	85	130	22	1.1	36	0.97	30	33.5	11000		HSS7017E.T.P4S.UL	98.5	116	1
90	90	125	18	1.1	23	0.59	23.6	28.5	13000	20000	HS71918C.T.P4S.UL	100	114.5	0.6
	90	125	18	1.1	34	0.59	22.4	26.5	11000	18000	HS71918E.T.P4S.UL	100	114.5	0.6
	90	125	18	1.1	23	0.59	23.6	28.5	13000		HSS71918C.T.P4S.UL	100	114.5	0.6
	90	125	18	1.1	34	0.59	22.4	26.5	11000		HSS71918E.T.P4S.UL	100	114.5	0.6
	90	140	24	1.5	27	1.28	37.5	43	12000	19000	HS7018C.T.P4S.UL	105	124.5	1.5
	90	140	24	1.5	39	1.27	35.5	40	10000	17000	HS7018E.T.P4S.UL	105	124.5	1.5
	90	140	24	1.5	27	1.28	37.5	43	12000		HSS7018C.T.P4S.UL	105	124.5	1.5
	90	140	24	1.5	39	1.27	35.5	40	10000		HSS7018E.T.P4S.UL	105	124.5	1.5
95	95	130	18	1.1	24	0.61	24.5	30	12000	19000	HS71919C.T.P4S.UL	105	119.5	0.6



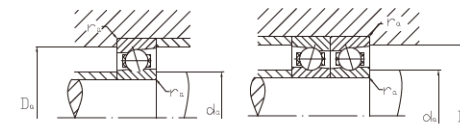
HS719C, HSS719C  
contact angle  $\alpha = 15^\circ$



HS719E, HSS719E  
contact angle  $\alpha = 25^\circ$



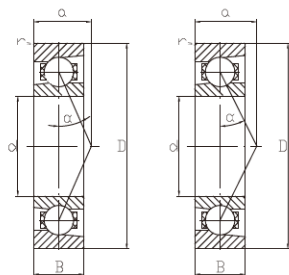
HS719C, HSS719C  
contact angle  $\alpha = 15^\circ$



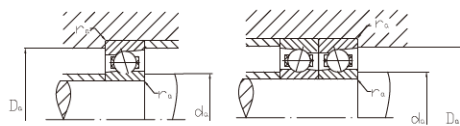
HS719E, HSS719E  
contact angle  $\alpha = 25^\circ$

## Single row angular contact ball bearings(steel balls)

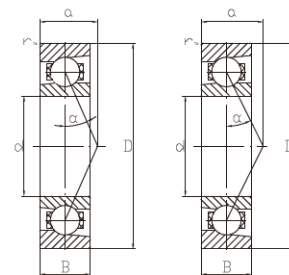
Shaft	Dimensions					Mass ≈ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm	r <sub>smin</sub> mm	a mm		C <sub>r</sub> kN	C <sub>or</sub> kN	Grease min <sup>-1</sup>	Oil Throwaway		da h12 mm	Da H12 mm	r <sub>amax</sub> mm
95	130	18	1.1	35	0.61	22.8	28	10000	17000	HS71919E.T.P4S.UL	105	119.5	0.6	
	130	18	1.1	24	0.61	24.5	30	12000		HSS71919C.T.P4S.UL	105	119.5	0.6	
	130	18	1.1	35	0.61	22.8	28	10000		HSS71919E.T.P4S.UL	105	119.5	0.6	
95	145	24	1.5	28	1.33	38	44	11000	18000	HS7019C.T.P4S.UL	104	135.5	1.5	
	145	24	1.5	40	1.33	35.5	41.5	9500	16000	HS7019E.T.P4S.UL	104	135.5	1.5	
	145	24	1.5	28	1.33	38	44	11000		HSS7019C.T.P4S.UL	104	135.5	1.5	
	145	24	1.5	40	1.33	35.5	41.5	9500		HSS7019E.T.P4S.UL	104	135.5	1.5	
100	140	20	1.1	26	0.86	29	36	11000	18000	HS71920C.T.P4S.UL	112	127.5	0.6	
	140	20	1.1	38	0.86	27.5	33.5	9500	16000	HS71920E.T.P4S.UL	112	127.5	0.6	
	140	20	1.1	26	0.86	29	36	11000		HSS71920C.T.P4S.UL	112	127.5	0.6	
	140	20	1.1	38	0.86	27.5	33.5	9500		HSS71920E.T.P4S.UL	112	127.5	0.6	
100	150	24	1.5	29	1.39	38	45.5	11000	18000	HS7020C.T.P4S.UL	115	134.5	1.5	
	150	24	1.5	41	1.38	36	42.5	9000	15000	HS7020E.T.P4S.UL	115	134.5	1.5	
	150	24	1.5	29	1.39	38	45.5	11000		HSS7020C.T.P4S.UL	115	134.5	1.5	
	150	24	1.5	41	1.38	36	42.5	9000		HSS7020E.T.P4S.UL	115	134.5	1.5	
105	145	20	1.1	27	0.9	30	38	11000	18000	HS71921C.T.P4S.UL	117	132.5	0.6	
	145	20	1.1	39	0.9	28	35.5	9000	15000	HS71921E.T.P4S.UL	117	132.5	0.6	
	145	20	1.1	27	0.9	30	38	11000		HSS71921C.T.P4S.UL	117	132.5	0.6	
	145	20	1.1	39	0.9	28	35.5	9000		HSS71921E.T.P4S.UL	117	132.5	0.6	
105	160	26	2	31	1.71	49	58.5	10000	17000	HS7021C.T.P4S.UL	121	143.5	2	
	160	26	2	44	1.71	46.5	54	8500	14000	HS7021E.T.P4S.UL	121	143.5	2	
	160	26	2	31	1.71	49	58.5	10000		HSS7021C.T.P4S.UL	121	143.5	2	
	160	26	2	44	1.71	46.5	54	8500		HSS7021E.T.P4S.UL	121	143.5	2	
110	150	20	1.1	27	0.93	34.5	44	10000	17000	HS71922C.T.P4S.UL	121	138.5	0.6	
	150	20	1.1	40	0.93	32.5	40.5	9000	15000	HS71922E.T.P4S.UL	121	138.5	0.6	
	150	20	1.1	27	0.93	34.5	44	10000		HSS71922C.T.P4S.UL	121	138.5	0.6	
	150	20	1.1	40	0.93	32.5	40.5	9000		HSS71922E.T.P4S.UL	121	138.5	0.6	
110	170	28	2	33	2.17	50	60	9500	16000	HS7022C.T.P4S.UL	128.5	151	2	
	170	28	2	47	2.17	46.5	56	8000	13000	HS7022E.T.P4S.UL	128.5	151	2	
	170	28	2	33	2.17	50	60	9500		HSS7022C.T.P4S.UL	128.5	151	2	
	170	28	2	47	2.17	46.5	56	8000		HSS7022E.T.P4S.UL	128.5	151	2	



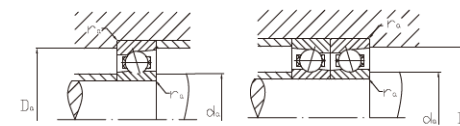
HS719C, HSS719C  
contact angle  $\alpha = 15^\circ$



HS719E, HSS719E  
contact angle  $\alpha = 25^\circ$



HS719C, HSS719C  
contact angle  $\alpha = 15^\circ$



HS719E, HSS719E  
contact angle  $\alpha = 25^\circ$

## Single row angular contact ball bearings(steel balls)

Shaft	Dimensions			$r_{smin}$ mm	a mm	Mass $\approx$ kg	Load rating		Attainable Speed		Bearing Code	Abutment dimensions		
	d mm	D mm	B mm				$C_r$ kN	$C_{or}$ kN	Grease $min^{-1}$	Oil Throwaway		da h12 mm	Da H12 mm	$r_{amax}$ mm
120	120	165	22	1.1	30	1.3	36.5	48	9000	15000	HS71924C.T.P4S.UL	133.5	151	0.6
	120	165	22	1.1	44	1.3	34	45	8000	13000	HS71924E.T.P4S.UL	133.5	151	0.6
	120	165	22	1.1	30	1.3	36.5	48	9000		HSS71924C.T.P4S.UL	133.5	151	0.6
	120	165	22	1.1	44	1.3	34	45	8000		HSS71924E.T.P4S.UL	133.5	151	0.6
	120	180	28	2	34	2.33	51	63	8500	14000	HS7024C.T.P4S.UL	138.5	161	2
	120	180	28	2	49	2.33	48	58.5	7500	12000	HS7024E.T.P4S.UL	138.5	161	2
	120	180	28	2	34	2.33	51	63	8500		HSS7024C.T.P4S.UL	138.5	161	2
	120	180	28	2	49	2.33	48	58.5	7500		HSS7024E.T.P4S.UL	138.5	161	2
130	130	180	24	1.5	33	1.71	41.5	56	8500	14000	HS71926C.T.P4S.UL	145	164.5	0.6
	130	180	24	1.5	48	1.71	39	52	7000	11000	HS71926E.T.P4S.UL	145	164.5	0.6
	130	180	24	1.5	33	1.71	41.5	56	8500		HSS71926C.T.P4S.UL	145	164.5	0.6
	130	180	24	1.5	48	1.71	39	52	7000		HSS71926E.T.P4S.UL	145	164.5	0.6
	130	200	33	2	39	3.52	65.5	83	7500	12000	HS7026C.T.P4S.UL	152	177.5	2
	130	200	33	2	55	3.51	62	78	6700	10000	HS7026E.T.P4S.UL	152	177.5	2
	130	200	33	2	39	3.52	65.5	83	7500		HSS7026C.T.P4S.UL	152	177.5	2
	130	200	33	2	55	3.51	62	78	6700		HSS7026E.T.P4S.UL	152	177.5	2
140	140	190	24	1.5	34	1.82	42.5	58.5	7500	12000	HS71928C.T.P4S.UL	155	174.5	0.6
	140	190	24	1.5	50	1.82	40	54	6700	10000	HS71928E.T.P4S.UL	155	174.5	0.6
	140	190	24	1.5	34	1.82	42.5	58.5	7500		HSS71928C.T.P4S.UL	155	174.5	0.6
	140	190	24	1.5	50	1.82	40	54	6700		HSS71928E.T.P4S.UL	155	174.5	0.6
	140	210	33	2	40	3.74	6.7	8.8	7000	11000	HS7028C.T.P4S.UL	162	187.5	2
	140	210	33	2	57	3.74	6.3	8.15	6300	9500	HS7028E.T.P4S.UL	162	187.5	2
	140	210	33	2	40	3.74	6.7	8.8	7000		HSS7028C.T.P4S.UL	162	187.5	2
	140	210	33	2	57	3.74	6.3	8.15	6300		HSS7028E.T.P4S.UL	162	187.5	2

HS7..C adjusted, in pairs or sets, contact angle  $\alpha = 15^\circ$ , restricted tolerances  
 HS7..E adjusted, in pairs or sets, contact angle  $\alpha = 25^\circ$ , restricted tolerances  
 HSS7..C adjusted, in pairs or sets, contact angle  $\alpha = 15^\circ$ , lip seals on both sides, non-contact, restricted tolerances  
 HSS7..E adjusted, in pairs or sets, contact angle  $\alpha = 25^\circ$ , lip seals on both sides, non-contact, restricted tolerances