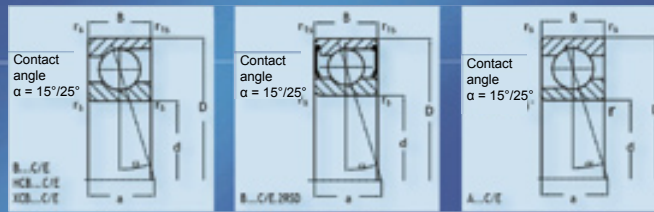


12. Size tables



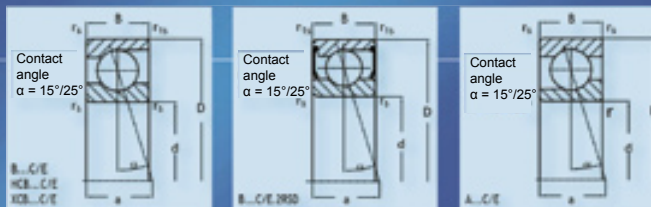
	Size of shaft (mm)						Mounting size (mm)				Size DLR (mm)			
	d	D	B	a	r _s min	r _s max	d _h 12	D _h 12	r _s max	r _s max	N _B	N _A	S _B	S _A
140	140	210	33	40	2,00	1,10	152,0	199,0	2,0	1,0				
	140	210	33	57	2,00	1,10	152,0	199,0	2,0	1,0				
	140	210	33	40	2,00	1,10	152,0	199,0	2,0	1,0				
	140	210	33	57	2,00	1,10	152,0	199,0	2,0	1,0				
	140	210	33	40	2,00	1,10	152,0	199,0	2,0	1,0				
	140	210	33	57	2,00	1,10	152,0	199,0	2,0	1,0				
	140	210	33	40	2,00	1,10	152,0	199,0	2,0	1,0				
	140	210	33	57	2,00	1,10	152,0	199,0	2,0	1,0				
	140	250	42	47	3,00	3,00	163,0	226,5	2,5	2,5				
	140	250	42	66	3,00	3,00	163,0	226,5	2,5	2,5				
	140	250	42	47	3,00	3,00	163,0	226,5	2,5	2,5				
	140	250	42	66	3,00	3,00	163,0	226,5	2,5	2,5				
150	150	210	28	38	2,00	1,10	160,0	199,0	1,0	1,0				
	150	210	28	56	2,00	1,10	160,0	199,0	1,0	1,0				
	150	210	28	38	2,00	1,10	160,0	199,0	1,0	1,0				
	150	210	28	56	2,00	1,10	160,0	199,0	1,0	1,0				
	150	210	28	38	2,00	1,10	160,0	199,0	1,0	1,0				
	150	210	28	56	2,00	1,10	160,0	199,0	1,0	1,0				
	150	210	28	38	2,00	1,10	160,0	199,0	1,0	1,0				
	150	210	28	56	2,00	1,10	160,0	199,0	1,0	1,0				
	150	225	35	43	2,10	1,50	163,0	213,0	2,1	1,0				
	150	225	35	61	2,10	1,50	163,0	213,0	2,1	1,0				
	150	225	35	43	2,10	1,50	163,0	213,0	2,1	1,0				
	150	225	35	61	2,10	1,50	163,0	213,0	2,1	1,0				
	150	225	35	43	2,10	1,50	163,0	213,0	2,1	1,0				
	150	225	35	61	2,10	1,50	163,0	213,0	2,1	1,0				
	150	270	45	51	3,00	3,00	178,0	241,5	2,5	2,5				
	150	270	45	71	3,00	3,00	178,0	241,5	2,5	2,5				
150	270	45	51	3,00	3,00	178,0	241,5	2,5	2,5					
150	270	45	71	3,00	3,00	178,0	241,5	2,5	2,5					
160	160	220	28	40	2,00	1,10	170,0	209,0	1,0	1,0				
	160	220	28	58	2,00	1,10	170,0	209,0	1,0	1,0				

12. Size tables



	Preload (H)			Axial stiffness (H/um)			Payload (kH)		Limit rotational rate (rpm)		Code	Weight
	L	M	S	L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing	kg
870	2775	5660	141,5	240,0	340,0	134,4	148,7	6300		B7028C.2RSD.T.P4S.UL	3,34	
1345	4445	9460	340,3	537,0	720,0	126,7	138,3	5600		B7028E.2RSD.T.P4S.UL	3,34	
870	2775	5660	141,5	240,0	340,0	134,4	148,7	6300	8500	B7028C.T.P4S.UL	3,34	
1345	4445	9460	340,3	537,0	720,0	126,7	138,3	5600	7500	B7028E.T.P4S.UL	3,34	
480	1580	3270	125,8	205,5	290,0	134,4	104,1	7000	11000	HCB7028C.T.P4S.UL	2,78	
685	2435	5130	303,0	480,5	638,5	126,7	96,8	6300	9500	HCB7028E.T.P4S.UL	2,78	
480	1580	3270	125,8	205,5	290,0	215,0	104,1	9500	16000	XCB7028C.T.P4S.UL	2,78	
685	2435	5130	303,0	480,5	638,5	202,7	96,8	8000	13000	XCB7028E.T.P4S.UL	2,78	
1360	4260	8640	154,8	260,0	370,0	220,5	247,9	5000	7500	B7228C.T.P4S.UL	7,87	
2150	6930	14100	377,0	580,0	780,0	208,8	236,3	4500	6700	B7228E.T.P4S.UL	7,87	
750	2400	4900	136,6	222,3	306,8	220,5	173,5	6300	9500	HCB7228C.T.P4S.UL	6,67	
1130	3800	7910	340,0	522,6	690,0	208,8	165,4	5300	8000	HCB7228E.T.P4S.UL	6,67	
710	2290	4680	140,5	238,0	342,0	110,3	124,5	5600		B71930C.2RSD.T.P4S.UL	2,49	
1050	3540	7370	333,0	527,5	708,0	103,6	115,9	5000		B71930E.2RSD.T.P4S.UL	2,49	
710	2290	4680	140,5	238,0	342,0	110,3	124,5	5600	8500	B71930C.T.P4S.UL	2,49	
1050	3890	7	333,0	527,5	708,0	103,6	115,9	5000	7500	B71930E.T.P4S.UL	2,49	
375	1260	2625	124,6	204,0	282,3	110,3	87,1	7000	11000	HCB71930C.T.P4S.UL	2,07	
520	1925	4115	295,0	471,4	630,0	103,6	81,1	6000	9000	HCB71930E.T.P4S.UL	2,07	
375	1260	2625	124,6	204,0	282,3	176,5	87,1	9000	15000	XCB71930C.T.P4S.UL	2,07	
520	1925	4115	295,0	471,4	630,0	165,8	81,1	8000	13000	XCB71930E.T.P4S.UL	2,07	
1100	3500	7150	156,0	265,3	378,4	167,5	183,5	5300	8000	B7030C.T.P4S.UL	3,99	
1700	5555	11420	373,2	584,2	785,0	158,0	173,3	4800	7000	B7030E.T.P4S.UL	3,99	
600	1960	4020	137,5	223,8	313,0	167,5	128,5	6700	10000	HCB7030C.T.P4S.UL	3,20	
900	3100	6500	335,5	527,5	700,0	158,0	121,3	5600	8500	HCB7030E.T.P4S.UL	3,20	
600	1960	4020	137,5	223,8	313,0	268,0	128,5	8500	14000	XCB7030C.T.P4S.UL	3,20	
900	3100	6500	335,5	527,5	700,0	252,8	121,3	7500	12000	XCB7030E.T.P4S.UL	3,20	
1400	4410	8950	165,5	274,0	388,5	226,9	268,2	4500	6700	B7230C.T.P4S.UL	10,1	
2190	7025	14400	393,3	605,5	815,0	214,5	255,3	4000	6000	B7230E.T.P4S.UL	10,1	
770	2470	5050	143,3	235,5	322,0	226,9	187,7	5600	8500	HCB7230C.T.P4S.UL	8,70	
1140	3860	8025	353,0	548,0	722,5	214,5	178,7	5000	7500	HCB7230E.T.P4S.UL	8,70	
730	2340	4790	145,5	245,3	353,0	111,5	128,6	5000	7500	B71932C.T.P4S.UL	2,62	
1050	3600	7500	344,4	544,3	730,0	104,8	119,8	4800	7000	B71932E.T.P4S.UL	2,62	

12. Size tables



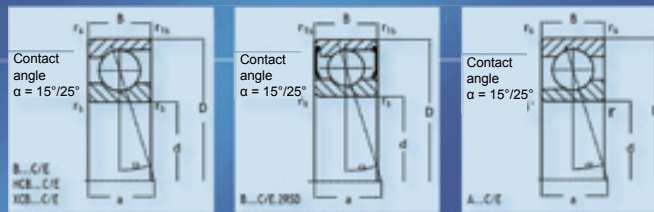
	Size of shaft (mm)						Mounting size (mm)				Size DLR (mm)			
	d	D	B	a	r _s min	r _{ts} min	d _h H12	D _h H12	r _s max	r _b max	N _b	N _A	S _b	S _A
190	190	260	33	47	2,00	1,10	202,0	247,0	1,0	1,0				
	190	260	33	69	2,00	1,10	202,0	247,0	1,0	1,0				
	190	290	46	55	2,10	2,10	206,0	274,0	2,0	1,0				
	190	290	46	79	2,10	2,10	206,0	274,0	2,0	1,0				
	190	340	55	63	4,00	4,00	223,5	306,5	3,0	3,0				
	190	340	55	89	4,00	4,00	223,5	306,5	3,0	3,0				
200	200	280	38	51	2,10	1,50	214,0	266,0	1,0	1,0				
	200	280	38	75	2,10	1,50	214,0	266,0	1,0	1,0				
	200	280	38	51	2,10	1,50	214,0	266,0	1,0	1,0				
	200	280	38	75	2,10	1,50	214,0	266,0	1,0	1,0				
	200	310	51	60	2,10	2,10	217,0	293,0	2,0	1,0				
	200	310	51	85	2,10	2,10	217,0	293,0	2,0	1,0				
	200	360	58	67	4,00	4,00	238,5	321,5	3,0	3,0				
200	360	58	94	4,00	4,00	238,5	321,5	3,0	3,0					
220	220	300	38	54	2,10	1,50	234,0	286,0	1,0	1,0				
	220	300	38	80	2,10	1,50	234,0	286,0	1,0	1,0				
	220	300	38	54	2,10	1,50	234,0	286,0	1,0	1,0				
	220	300	38	80	2,10	1,50	234,0	286,0	1,0	1,0				
	220	340	56	66	3,00	3,00	239,0	321,0	2,5	1,0				
	220	340	56	93	3,00	3,00	239,0	321,0	2,5	1,0				
	220	400	65	74	4,00	4,00	264,0	356,0	3,0	3,0				
	220	400	65	104	4,00	4,00	264,0	356,0	3,0	3,0				
240	240	320	38	57	2,10	1,50	254,0	307,0	1,0	1,0				
	240	320	38	84	2,10	1,50	254,0	307,0	1,0	1,0				
	240	320	38	57	2,10	1,50	254,0	307,0	1,0	1,0				
	240	320	38	84	2,10	1,50	254,0	307,0	1,0	1,0				
	240	360	56	68	3,00	3,00	260,0	341,0	2,5	1,0				
	240	360	56	98	3,00	3,00	260,0	341,0	2,5	1,0				
260	260	360	46	65	2,10	1,50	278,0	342,0	1,0	1,0				
	260	360	46	95	2,10	1,50	278,0	342,0	1,0	1,0				
280	280	380	46	67	2,10	1,50	298,0	362,0	1,0	1,0				
	280	380	46	100	2,10	1,50	298,0	362,0	1,0	1,0				

12. Size tables



	Preload (H)			Axial stiffness (H/um)			Payload (кН)		Limit rotational rate (rpm)		Code	Weight
	L	M	S	L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing	kg
	450	1620	3440	142,5	242,0	336,0	149,3	129,5	5300	8000	HCB71938C.T.P4S.UL	3,59
	565	2400	5310	333,3	560,0	757,0	140,3	120,7	4500	6700	HCB71938E.T.P4S.UL	3,59
	1450	4670	9580	181,0	303,0	440,0	227,5	287,0	3800	5600	B7038C.T.P4S.UL	9,18
	2150	7285	15230	430,0	680,0	913,0	214,6	270,8	3600	5300	B7038E.T.P4S.UL	9,18
	1860	5960	12160	202,0	335,0	478,0	292,4	399,1	3400	5000	B7238C.T.P4S.UL	20,0
	2815	9425	19525	485,0	760,0	1015,0	275,0	371,1	3200	4800	B7238E.T.P4S.UL	20,0
	1135	3735	7700	180,0	305,0	435,0	183,4	225,3	3800	5600	B71940C.T.P4S.UL	6,03
	1645	5800	12200	425,0	680,0	915,0	172,5	209,8	3600	5300	B71940E.T.P4S.UL	6,03
	580	2030	4270	155,5	260,0	360,0	183,4	157,7	5000	7500	HCB71940C.T.P4S.UL	5,04
	760	3060	6660	365,0	602,0	810,0	172,5	146,9	4300	6300	HCB71940E.T.P4S.UL	5,04
	1800	5770	11780	194,0	322,0	458,0	284,1	374,9	3600	5300	B7040C.T.P4S.UL	11,6
	2730	9120	18890	463,0	725,0	970,0	268,4	354,3	3200	4800	B7040E.T.P4S.UL	11,6
	1915	6140	12500	210,5	350,0	498,0	299,1	417,6	3200	4800	B7240C.T.P4S.UL	24,1
	2900	9725	20160	506,0	795,0	1060,0	282,1	388,1	3000	4500	B7240E.T.P4S.UL	24,1
	1190	3940	8140	197,0	332,0	475,0	193,6	250,0	3600	5300	B71944C.T.P4S.UL	6,57
	1715	6085	12865	463,0	742,0	998,0	182,0	232,9	3200	4800	B71944E.T.P4S.UL	6,57
	620	2180	4600	172,2	285,0	398,0	193,6	175,0	4500	6700	HCB71944C.T.P4S.UL	5,46
	800	3260	7120	400,0	660,0	890,0	182,0	163,0	3800	5600	HCB71944E.T.P4S.UL	5,46
	1915	6140	12540	213,0	352,0	500,0	299,1	417,6	3200	4800	B7044C.T.P4S.UL	15,7
	2905	9730	20165	507,0	795,0	1063,0	282,1	388,1	3000	4500	B7044E.T.P4S.UL	15,7
	2405	7620	15565	225,0	370,0	525,0	364,3	527,0	2800	4300	B7244C.T.P4S.UL	33,0
	3670	12080	24980	543,0	844,0	1130,0	344,3	501,5	2600	4000	B7244E.T.P4S.UL	33,0
	1230	4080	8430	208,0	350,0	500,0	202,8	267,9	3200	4800	B71948C.T.P4S.UL	7,08
	1770	6300	13350	490,0	785,0	1060,0	190,6	249,6	3000	4500	B71948E.T.P4S.UL	7,08
	630	2240	4730	179,8	300,0	420,0	202,8	187,5	4000	6000	HCB71948C.T.P4S.UL	5,89
	795	3280	7200	420,0	695,0	930,0	190,6	174,7	3600	5300	HCB71948E.T.P4S.UL	5,89
	1970	6330	12925	220,0	365,0	518,0	304,3	434,0	3000	4500	B7048C.T.P4S.UL	16,7
	2930	9865	20450	520,0	820,0	1100,0	286,7	403,6	2800	4300	B7048E.T.P4S.UL	16,7
	1630	5290	10875	222,2	372,3	529,0	254,9	365,9	3000	4500	B71952C.T.P4S.UL	12,1
	2390	8250	17270	530,0	840,0	1130,0	239,7	340,8	2600	4000	B71952E.T.P4S.UL	12,1
	1700	5560	11440	239,0	398,0	560,0	263,4	391,2	2600	4000	B71956C.T.P4S.UL	12,9
	2460	8530	17850	560,0	890,0	1190,0	247,5	364,5	2400	3800	B71956E.T.P4S.UL	12,9

12. Size tables



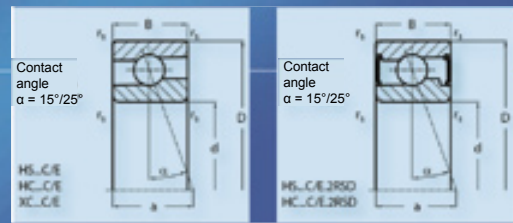
	Size of shaft (mm)						Mounting size (mm)				Size DLR (mm)			
	d	D	B	a	r _s min	r _h min	d ₉ H12	D ₉ H12	r _s max	r _h max	N _B	N _A	S _B	S _A
300	300	420	56	76	3,00	3,00	322,0	398,0	1,5	1,0				
	300	420	56	112	3,00	3,00	322,0	398,0	1,5	1,0				
320	320	440	56	79	3,00	3,00	342,0	418,0	1,5	1,0				
	320	440	56	117	3,00	3,00	342,0	418,0	1,5	1,0				
340	340	460	56	82	3,00	3,00	362,0	438,0	1,5	1,0				
	340	460	56	121	3,00	3,00	362,0	438,0	1,5	1,0				
360	360	480	56	84	3,00	3,00	382,0	458,0	1,5	1,0				
	360	480	56	126	3,00	3,00	382,0	458,0	1,5	1,0				

12. Size tables



	Preload (H)			Axial stiffness (H/um)			Payload (кН)		Limit rotational rate (rpm)		Code	Weight
	L	M	S	L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing	kg
	2100	6770	13860	250,0	414,0	585,0	326,7	504,3	2400	3800	B71960C.T.P4S.UL	20,4
	3120	10570	21990	600,0	940,0	1250,0	307,1	469,6	2200	3600	B71960E.T.P4S.UL	20,4
	2180	7020	14400	267,0	440,0	620,0	339,3	543,4	2200	3600	B71964C.T.P4S.UL	21,6
	3240	11000	22900	640,0	1000,0	1335,0	318,9	506,2	2000	3400	B71964E.T.P4S.UL	21,6
	2060	6880	14300	266,6	444,4	625,0	342,8	560,3	2200	3600	B71968C.T.P4S.UL	22,7
	2920	10600	22500	633,0	1010,0	1350,0	322,0	522,1	1900	3200	B71968E.T.P4S.UL	22,7
	2100	7040	14640	280,0	465,0	655,0	354,0	597,1	2000	3400	B71972C.T.P4S.UL	23,9
	3030	11030	23400	670,0	1070,0	1440,0	332,5	556,6	1800	3000	B71972E.T.P4S.UL	23,9

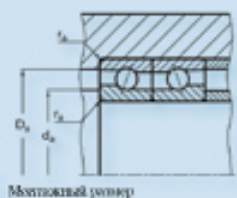
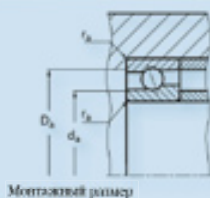
12. Size tables



12.2. High speed spindle bearings

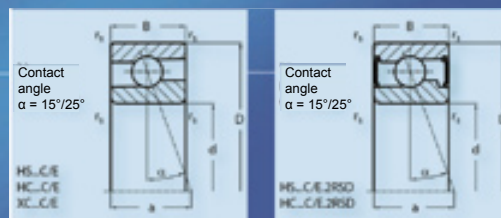
	Size of shaft (mm) ^a					Mounting size (mm)			Preload (H)			
	d	D	B	a	r _{min}	d _{h12}	D _{H12}	r _{max}	L	M	S	
17	17	35	10	9	0,3	21,0	32,0	0,3	13	39	78	
	17	35	10	11	0,3	21,0	32,0	0,3	21	63	126	
	17	35	10	9	0,3	21,0	32,0	0,3	9	27	54	
	17	35	10	11	0,3	21,0	32,0	0,3	14	42	84	
	17	35	10	9	0,3	21,0	32,0	0,3	13	39	78	
	17	35	10	11	0,3	21,0	32,0	0,3	21	63	126	
	17	35	10	9	0,3	21,0	32,0	0,3	9	27	54	
	17	35	10	11	0,3	21,0	32,0	0,3	14	42	84	
	17	35	10	9	0,3	21,0	32,0	0,3	9	27	54	
	17	35	10	11	0,3	21,0	32,0	0,3	14	42	84	
	20	20	37	9	8	0,3	24,0	33,5	0,3	13	39	79
		20	37	9	11	0,3	24,0	33,5	0,3	21	63	126
		20	37	9	8	0,3	24,0	33,5	0,3	9	27	54
		20	37	9	11	0,3	24,0	33,5	0,3	15	45	90
		20	37	9	8	0,3	24,0	33,5	0,3	13	39	79
		20	37	9	11	0,3	24,0	33,5	0,3	21	63	126
20		37	9	8	0,3	24,0	33,5	0,3	9	27	54	
20		37	9	11	0,3	24,0	33,5	0,3	15	45	90	
20		37	9	8	0,3	24,0	33,5	0,3	9	27	54	
20		37	9	11	0,3	24,0	33,5	0,3	15	45	90	
20		42	12	10	0,6	25,0	37,0	0,6	20	63	126	
20		42	12	13	0,6	25,0	37,0	0,6	34	102	204	
20		42	12	10	0,6	25,0	37,0	0,6	15	45	90	
20		42	12	13	0,6	25,0	37,0	0,6	23	69	138	
20		42	12	10	0,6	25,0	37,0	0,6	20	63	126	
20		42	12	13	0,6	25,0	37,0	0,6	34	102	204	
20		42	12	10	0,6	25,0	37,0	0,6	15	45	90	
20		42	12	13	0,6	25,0	37,0	0,6	23	69	138	
20		42	12	10	0,6	25,0	37,0	0,6	15	45	90	
20		42	12	13	0,6	25,0	37,0	0,6	23	69	138	

12. Size tables



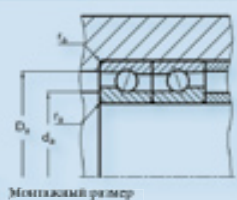
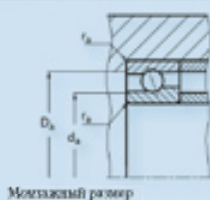
	Axial stiffness (H/um)			Payload (кН)		Limit rotational rate (rpm)		Code	Weight kg
	L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing	
	14,5	22,5	31,5	2,9	1,6	53 000		HS7003C.2RSD.T.P4S.UL	0,040
	35,8	52,9	69,3	2,7	1,5	45 000		HS7003E.2RSD.T.P4S.UL	0,040
	14,2	21,3	29,2	2,9	1,1	63 000		HC7003C.2RSD.T.P4S.UL	0,039
	35,5	52,1	68,2	2,7	1,0	53 000		HC7003E.2RSD.T.P4S.UL	0,039
	14,5	22,5	31,5	2,9	1,6	53 000	80 000	HS7003C.T.P4S.UL	0,040
	35,8	52,9	69,3	2,7	1,5	45 000	67 000	HS7003E.T.P4S.UL	0,040
	14,2	21,3	29,2	2,9	1,1	63 000	95 000	HC7003C.T.P4S.UL	0,039
	35,5	52,1	68,2	2,7	1,0	53 000	80 000	HC7003E.T.P4S.UL	0,039
	14,2	21,3	29,2	4,6	1,1	80 000	130 000	XC7003C.T.P4S.UL	0,039
	35,5	52,1	68,2	4,3	1,0	70 000	100 000	XC7003E.T.P4S.UL	0,039
	15,0	23,5	32,7	3,0	1,7	50 000		HS71904C.2RSD.T.P4S.UL	0,040
	37,0	55,0	72,8	2,9	1,6	43 000		HS71904E.2RSD.T.P4S.UL	0,040
	14,5	22,5	31,0	3,0	1,2	56 000		HC71904C.2RSD.T.P4S.UL	0,039
	37,5	54,5	71,5	2,9	1,1	48 000		HC71904E.2RSD.T.P4S.UL	0,039
	15,0	23,5	32,7	3,0	1,7	50 000	75 000	HS71904C.T.P4S.UL	0,040
	37,0	55,0	72,8	2,9	1,6	43 000	63 000	HS71904E.T.P4S.UL	0,040
	14,5	22,5	31,0	3,0	1,2	56 000	85 000	HC71904C.T.P4S.UL	0,039
	37,5	54,5	71,5	2,9	1,1	48 000	70 000	HC71904E.T.P4S.UL	0,039
	14,5	22,5	31,0	4,9	1,2	75 000	120 000	XC71904C.T.P4S.UL	0,039
	37,5	54,5	71,5	4,6	1,1	63 000	95 000	XC71904E.T.P4S.UL	0,039
	20,0	31,5	43,5	4,7	2,7	45 000		HS7004C.2RSD.T.P4S.UL	0,080
	49,3	73,5	96,0	4,4	2,5	38 000		HS7004E.2RSD.T.P4S.UL	0,080
	19,5	30,0	41,0	4,7	1,9	53 000		HC7004C.2RSD.T.P4S.UL	0,077
	49,0	72,5	94,0	4,4	1,8	45 000		HC7004E.2RSD.T.P4S.UL	0,077
	20,0	31,5	43,5	4,7	2,7	45 000	67 000	HS7004C.T.P4S.UL	0,080
	49,3	73,5	96,0	4,4	2,5	38 000	56 000	HS7004E.T.P4S.UL	0,080
	19,5	30,0	41,0	4,7	1,9	53 000	80 000	HC7004C.T.P4S.UL	0,077
	49,0	72,5	94,0	4,4	1,8	45 000	67 000	HC7004E.T.P4S.UL	0,077
	19,5	30,0	41,0	7,5	1,9	67 000	100 000	XC7004C.T.P4S.UL	0,077
	49,0	72,5	94,0	7,1	1,8	56 000	85 000	XC7004E.T.P4S.UL	0,077

12. Size tables



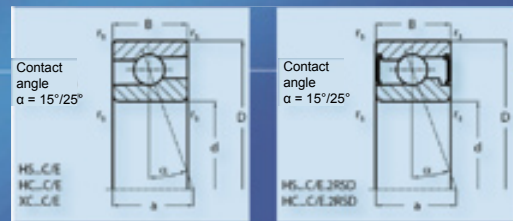
	Size of shaft (mm)					Mounting size (mm)			Preload (H)		
	d	D	B	a	r_{min}	d_h H12	D_H H12	r_{max}	L	M	S
25	25	42	9	9	0,3	29,0	38,5	0,3	14	42	84
	25	42	9	12	0,3	29,0	38,5	0,3	23	69	138
	25	42	9	9	0,3	29,0	38,5	0,3	10	30	60
	25	42	9	12	0,3	29,0	38,5	0,3	16	48	96
	25	42	9	9	0,3	29,0	38,5	0,3	14	42	84
	25	42	9	12	0,3	29,0	38,5	0,3	23	69	138
	25	42	9	9	0,3	29,0	38,5	0,3	10	30	60
	25	42	9	12	0,3	29,0	38,5	0,3	16	48	96
	25	42	9	9	0,3	29,0	38,5	0,3	10	30	60
	25	42	9	12	0,3	29,0	38,5	0,3	16	48	96
	25	47	12	11	0,6	30,0	42,0	0,6	21	63	126
	25	47	12	14	0,6	30,0	42,0	0,6	35	105	210
	25	47	12	11	0,6	30,0	42,0	0,6	15	45	90
	25	47	12	14	0,6	30,0	42,0	0,6	24	72	144
	25	47	12	11	0,6	30,0	42,0	0,6	21	63	126
	25	47	12	14	0,6	30,0	42,0	0,6	35	105	210
25	47	12	11	0,6	30,0	42,0	0,6	15	45	90	
25	47	12	14	0,6	30,0	42,0	0,6	24	72	144	
25	47	12	11	0,6	30,0	42,0	0,6	15	45	90	
25	47	12	14	0,6	30,0	42,0	0,6	24	72	144	
30	30	47	9	10	0,3	34,0	43,5	0,3	21	63	126
	30	47	9	13	0,3	34,0	43,5	0,3	35	105	210
	30	47	9	10	0,3	34,0	43,5	0,3	15	45	90
	30	47	9	13	0,3	34,0	43,5	0,3	24	72	144
	30	47	9	10	0,3	34,0	43,5	0,3	21	63	126
	30	47	9	13	0,3	34,0	43,5	0,3	35	105	210
	30	47	9	10	0,3	34,0	43,5	0,3	15	45	90
	30	47	9	13	0,3	34,0	43,5	0,3	24	72	144
	30	47	9	10	0,3	34,0	43,5	0,3	15	45	90
	30	47	9	13	0,3	34,0	43,5	0,3	24	72	144
	30	55	13	12	1,0	36,0	49,0	1,0	29	87	174
	30	55	13	16	1,0	36,0	49,0	1,0	48	144	288
	30	55	13	12	1,0	36,0	49,0	1,0	20	60	120
	30	55	13	16	1,0	36,0	49,0	1,0	33	99	198

12. Size tables



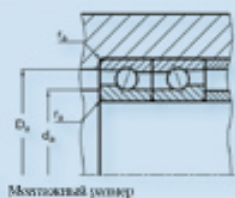
	Axial stiffness (H/um)			Payload (кН)		Limit rotational rate (rpm)		Code	Weight
	L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing	kg
	17,0	26,5	36,5	3,3	2,1	43 000		HS71905C.2RSD.T.P4S.UL	0,050
	42,0	63,0	82,5	3,1	2,0	36 000		HS71905E.2RSD.T.P4S.UL	0,050
	16,5	25,5	34,5	3,3	1,5	48 000		HC71905C.2RSD.T.P4S.UL	0,048
	42,5	62,0	80,0	3,1	1,4	40 000		HC71905E.2RSD.T.P4S.UL	0,048
	17,0	26,5	36,5	3,3	2,1	43 000	63 000	HS71905C.T.P4S.UL	0,050
	42,0	63,0	82,5	3,1	2,0	36 000	53 000	HS71905E.T.P4S.UL	0,050
	16,5	25,5	34,5	3,3	1,5	48 000	70 000	HC71905C.T.P4S.UL	0,048
	42,5	62,0	80,0	3,1	1,4	40 000	60 000	HC71905E.T.P4S.UL	0,048
	16,5	25,5	34,5	5,2	1,5	63 000	95 000	XC71905C.T.P4S.UL	0,048
	42,5	62,0	80,0	5,0	1,4	53 000	80 000	XC71905E.T.P4S.UL	0,048
	20,5	33,0	45,5	4,7	2,9	38 000		HS7005C.2RSD.T.P4S.UL	0,090
	51,5	76,5	100,5	4,5	2,7	34 000		HS7005E.2RSD.T.P4S.UL	0,090
	20,1	31,5	42,0	4,7	2,0	45 000		HC7005C.2RSD.T.P4S.UL	0,087
	51,0	75,0	98,0	4,5	1,9	38 000		HC7005E.2RSD.T.P4S.UL	0,087
	20,5	33,0	45,5	4,7	2,9	38 000	56 000	HS7005C.T.P4S.UL	0,090
	51,5	76,5	100,5	4,5	2,7	34 000	50 000	HS7005E.T.P4S.UL	0,090
	20,1	31,5	42,0	4,7	2,0	45 000	67 000	HC7005C.T.P4S.UL	0,087
	51,0	75,0	98,0	4,5	1,9	38 000	56 000	HC7005E.T.P4S.UL	0,087
	20,1	31,5	42,0	7,6	2,0	60 000	90 000	XC7005C.T.P4S.UL	0,087
	51,0	75,0	98,0	7,2	1,9	50 000	75 000	XC7005E.T.P4S.UL	0,087
	21,3	33,5	47,0	4,9	3,2	36 000		HS71906C.2RSD.T.P4S.LL	0,050
	53,2	79,5	103,5	4,7	3,0	32 000		HS71906E.2RSD.T.P4S.UL	0,050
	21,0	32,5	44,0	4,9	2,2	43 000		HC71906C.2RSD.T.P4S.UL	0,047
	53,0	78,0	101,5	4,7	2,1	36 000		HC71906E.2RSD.T.P4S.LL	0,047
	21,3	33,5	47,0	4,9	3,2	36 000	53 000	HS71906C.T.P4S.UL	0,050
	53,2	79,5	103,5	4,7	3,0	32 000	48 000	HS71906E.T.P4S.UL	0,050
	21,0	32,5	44,0	4,9	2,2	43 000	63 000	HC71906C.T.P4S.UL	0,047
	53,0	78,0	101,5	4,7	2,1	36 000	53 000	HC71906E.T.P4S.UL	0,047
	21,0	32,5	44,0	7,9	2,2	53 000	80 000	XC71906C.T.P4S.UL	0,047
	53,0	78,0	101,5	7,5	2,1	48 000	70 000	XC71906E.T.P4S.UL	0,047
	24,3	38,8	53,5	6,7	4,3	32 000		HS7006C.2RSD.T.P4S.UL	0,130
	61,0	90,5	118,0	6,3	4,0	28 000		HS7006E.2RSD.T.P4S.UL	0,130
	24,0	37,0	50,0	6,7	3,0	38 000		HC7006C.2RSD.T.P4S.UL	0,125
	60,5	89,5	116,0	6,3	2,8	32 000		HC7006E.2RSD.T.P4S.UL	0,125

12. Size tables



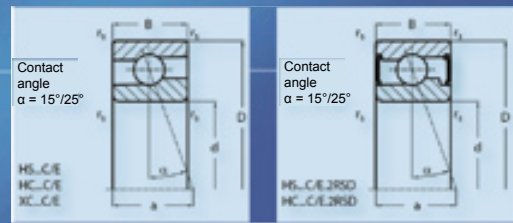
	Size of shaft (mm)					Mounting size (mm)			Preload (H)		
	d	D	B	a	r _{min}	d _{h12}	D _{H12}	r _{max}	L	M	S
25	25	42	9	9	0,3	29,0	38,5	0,3	14	42	84
	25	42	9	12	0,3	29,0	38,5	0,3	23	69	138
	25	42	9	9	0,3	29,0	38,5	0,3	10	30	60
	25	42	9	12	0,3	29,0	38,5	0,3	16	48	96
	25	42	9	9	0,3	29,0	38,5	0,3	14	42	84
	25	42	9	12	0,3	29,0	38,5	0,3	23	69	138
	25	42	9	9	0,3	29,0	38,5	0,3	10	30	60
	25	42	9	12	0,3	29,0	38,5	0,3	16	48	96
	25	42	9	9	0,3	29,0	38,5	0,3	10	30	60
	25	42	9	12	0,3	29,0	38,5	0,3	16	48	96
	25	47	12	11	0,6	30,0	42,0	0,6	21	63	126
	25	47	12	14	0,6	30,0	42,0	0,6	35	105	210
25	47	12	11	0,6	30,0	42,0	0,6	15	45	90	
25	47	12	14	0,6	30,0	42,0	0,6	24	72	144	
25	47	12	11	0,6	30,0	42,0	0,6	21	63	126	
25	47	12	14	0,6	30,0	42,0	0,6	35	105	210	
25	47	12	11	0,6	30,0	42,0	0,6	15	45	90	
25	47	12	14	0,6	30,0	42,0	0,6	24	72	144	
25	47	12	11	0,6	30,0	42,0	0,6	15	45	90	
25	47	12	14	0,6	30,0	42,0	0,6	24	72	144	
30	30	47	9	10	0,3	34,0	43,5	0,3	21	63	126
	30	47	9	13	0,3	34,0	43,5	0,3	35	105	210
	30	47	9	10	0,3	34,0	43,5	0,3	15	45	90
	30	47	9	13	0,3	34,0	43,5	0,3	24	72	144
	30	47	9	10	0,3	34,0	43,5	0,3	21	63	126
	30	47	9	13	0,3	34,0	43,5	0,3	35	105	210
	30	47	9	10	0,3	34,0	43,5	0,3	15	45	90
	30	47	9	13	0,3	34,0	43,5	0,3	24	72	144
	30	47	9	10	0,3	34,0	43,5	0,3	15	45	90
	30	47	9	13	0,3	34,0	43,5	0,3	24	72	144
	30	55	13	12	1,0	36,0	49,0	1,0	29	87	174
	30	55	13	16	1,0	36,0	49,0	1,0	48	144	288
30	55	13	12	1,0	36,0	49,0	1,0	20	60	120	
30	55	13	16	1,0	36,0	49,0	1,0	33	99	198	

12. Size tables



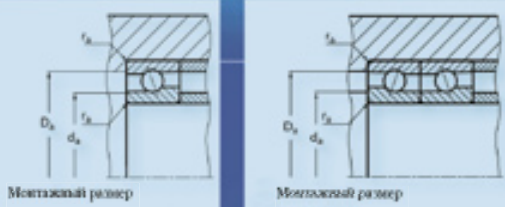
	Axial stiffness (H/um)			Payload (кН)		Limit rotational rate (rpm)		Code	Weight kg
	L	M	S	Dyn. C	Stat. Co	Grease	Oil		
	17,0	26,5	36,5	3,3	2,1	43 000		HS71905C.2RSD.T.P4S.UL	0,050
	42,0	63,0	82,5	3,1	2,0	36 000		HS71905E.2RSD.T.P4S.UL	0,050
	16,5	25,5	34,5	3,3	1,5	48 000		HC71905C.2RSD.T.P4S.UL	0,048
	42,5	62,0	80,0	3,1	1,4	40 000		HC71905E.2RSD.T.P4S.UL	0,048
	17,0	26,5	36,5	3,3	2,1	43 000	63 000	HS71905C.T.P4S.UL	0,050
	42,0	63,0	82,5	3,1	2,0	36 000	53 000	HS71905E.T.P4S.UL	0,050
	16,5	25,5	34,5	3,3	1,5	48 000	70 000	HC71905C.T.P4S.UL	0,048
	42,5	62,0	80,0	3,1	1,4	40 000	60 000	HC71905E.T.P4S.UL	0,048
	16,5	25,5	34,5	5,2	1,5	63 000	95 000	XC71905C.T.P4S.UL	0,048
	42,5	62,0	80,0	5,0	1,4	53 000	80 000	XC71905E.T.P4S.UL	0,048
	20,5	33,0	45,5	4,7	2,9	38 000		HS7005C.2RSD.T.P4S.UL	0,090
	51,5	76,5	100,5	4,5	2,7	34 000		HS7005E.2RSD.T.P4S.UL	0,090
	20,1	31,5	42,0	4,7	2,0	45 000		HC7005C.2RSD.T.P4S.UL	0,087
	51,0	75,0	98,0	4,5	1,9	38 000		HC7005E.2RSD.T.P4S.UL	0,087
	20,5	33,0	45,5	4,7	2,9	38 000	56 000	HS7005C.T.P4S.UL	0,090
	51,5	76,5	100,5	4,5	2,7	34 000	50 000	HS7005E.T.P4S.UL	0,090
	20,1	31,5	42,0	4,7	2,0	45 000	67 000	HC7005C.T.P4S.UL	0,087
	51,0	75,0	98,0	4,5	1,9	38 000	56 000	HC7005E.T.P4S.UL	0,087
	20,1	31,5	42,0	7,6	2,0	60 000	90 000	XC7005C.T.P4S.UL	0,087
	51,0	75,0	98,0	7,2	1,9	50 000	75 000	XC7005E.T.P4S.UL	0,087
	21,3	33,5	47,0	4,9	3,2	36 000		HS71906C.2RSD.T.P4S.UL	0,050
	53,2	79,5	103,5	4,7	3,0	32 000		HS71906E.2RSD.T.P4S.UL	0,050
	21,0	32,5	44,0	4,9	2,2	43 000		HC71906C.2RSD.T.P4S.UL	0,047
	53,0	78,0	101,5	4,7	2,1	36 000		HC71906E.2RSD.T.P4S.UL	0,047
	21,3	33,5	47,0	4,9	3,2	36 000	53 000	HS71906C.T.P4S.UL	0,050
	53,2	79,5	103,5	4,7	3,0	32 000	48 000	HS71906E.T.P4S.UL	0,050
	21,0	32,5	44,0	4,9	2,2	43 000	63 000	HC71906C.T.P4S.UL	0,047
	53,0	78,0	101,5	4,7	2,1	36 000	53 000	HC71906E.T.P4S.UL	0,047
	21,0	32,5	44,0	7,9	2,2	53 000	80 000	XC71906C.T.P4S.UL	0,047
	53,0	78,0	101,5	7,5	2,1	48 000	70 000	XC71906E.T.P4S.UL	0,047
	24,3	38,8	53,5	6,7	4,3	32 000		HS7006C.2RSD.T.P4S.UL	0,130
	61,0	90,5	118,0	6,3	4,0	28 000		HS7006E.2RSD.T.P4S.UL	0,130
	24,0	37,0	50,0	6,7	3,0	38 000		HC7006C.2RSD.T.P4S.UL	0,125
	60,5	89,5	116,0	6,3	2,3	32 000		HC7006E.2RSD.T.P4S.UL	0,125

12. Size tables



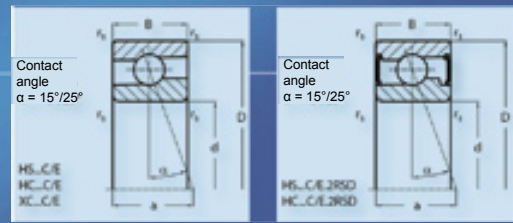
	Size of shaft (mm)					Mounting size (mm)			Preload (H)		
	d	D	B	a	r _s min	d _s h12	D _s H12	r _s max	L	M	S
40	40	62	12	13	0,6	45,0	58,5	0,6	25	75	150
	40	62	12	18	0,6	45,0	58,5	0,6	40	120	240
	40	62	12	13	0,6	45,0	58,5	0,6	17	51	102
	40	62	12	18	0,6	45,0	58,5	0,6	28	84	168
	40	62	12	13	0,6	45,0	58,5	0,6	17	51	102
	40	62	12	18	0,6	45,0	58,5	0,6	28	84	168
	40	68	15	15	1,0	46,0	62,0	1,0	34	102	204
	40	68	15	20	1,0	46,0	62,0	1,0	54	160	324
	40	68	15	15	1,0	46,0	62,0	1,0	23	69	138
	40	68	15	20	1,0	46,0	62,0	1,0	38	114	228
	40	68	15	15	1,0	46,0	62,0	1,0	34	102	204
	40	68	15	20	1,0	46,0	62,0	1,0	54	160	324
	40	68	15	15	1,0	46,0	62,0	1,0	23	69	138
	40	68	15	20	1,0	46,0	62,0	1,0	38	114	228
	40	68	15	15	1,0	46,0	62,0	1,0	23	69	138
	40	68	15	20	1,0	46,0	62,0	1,0	38	114	228
45	45	68	12	14	0,6	50,0	63,5	0,6	34	102	204
	45	68	12	19	0,6	50,0	63,5	0,6	55	165	330
	45	68	12	14	0,6	50,0	63,5	0,6	24	72	144
	45	68	12	19	0,6	50,0	63,5	0,6	38	114	228
	45	68	12	14	0,6	50,0	63,5	0,6	34	102	204
	45	68	12	19	0,6	50,0	63,5	0,6	55	165	330
	45	68	12	14	0,6	50,0	63,5	0,6	24	72	144
	45	68	12	19	0,6	50,0	63,5	0,6	38	114	228
	45	68	12	14	0,6	50,0	63,5	0,6	24	72	144
	45	68	12	19	0,6	50,0	63,5	0,6	38	114	228
	45	75	16	16	1,0	51,0	69,0	1,0	44	132	264
	45	75	16	22	1,0	51,0	69,0	1,0	71	213	426
	45	75	16	16	1,0	51,0	69,0	1,0	30	90	180
	45	75	16	22	1,0	51,0	69,0	1,0	49	147	294

12. Size tables



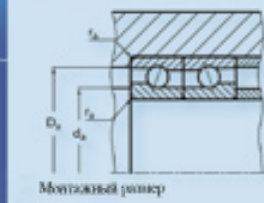
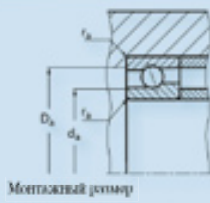
Axial stiffness (H/um)			Payload (кН)		Limit rotational rate (rpm)		Code	Weight
L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing	kg
27,0	42,0	58,0	5,7	4,4	28 000	43 000	HS71908C.T.P4S.UL	0,130
67,0	100,0	130,0	5,4	4,1	24 000	36 000	HS71908E.T.P4S.UL	0,130
26,5	40,5	54,5	5,7	3,1	32 000	48 000	HC71908C.T.P4S.UL	0,126
67,0	99,0	128,0	5,4	2,9	28 000	43 000	HC71908E.T.P4S.UL	0,126
26,5	40,5	54,5	9,1	3,1	40 000	60 000	XC71908C.T.P4S.UL	0,126
67,0	99,0	128,0	8,6	2,9	36 000	53 000	XC71908E.T.P4S.UL	0,126
30,0	48,0	65,0	7,6	5,7	26 000		HS7008C.2RSD.T.P4S.UL	0,220
75,0	112,0	146,0	7,2	5,4	22 000		HS7008E.2RSD.T.P4S.UL	0,220
29,5	45,5	61,0	7,6	4,0	30 000		HC7008C.2RSD.T.P4S.UL	0,213
74,8	111,0	143,0	7,2	3,8	26 000		HC7008E.2RSD.T.P4S.UL	0,213
30,0	48,0	65,0	7,6	5,7	26 000	40 000	HS7008C.T.P4S.UL	0,220
75,0	112,0	146,0	7,2	5,4	22 000	36 000	HS7008E.T.P4S.UL	0,220
29,5	45,5	61,0	7,6	4,0	30 000	45 000	HC7008C.T.P4S.UL	0,213
74,8	111,0	143,0	7,2	3,8	26 000	40 000	HC7008E.T.P4S.UL	0,213
29,5	45,5	61,0	12,2	4,0	38 000	56 000	XC7008C.T.P4S.UL	0,213
74,8	111,0	143,0	11,5	3,8	34 000	50 000	XC7008E.T.P4S.UL	0,213
31,3	49,0	67,0	7,8	6,0	24 000		HS71909C.2RSD.T.P4S.UL	0,140
77,7	115,5	151,0	7,4	5,6	22 000		HS71909E.2RSD.T.P4S.UL	0,140
31,0	47,0	63,0	7,8	4,2	28 000		HC71909C.2RSD.T.P4S.UL	0,133
77,0	114,0	148,0	7,4	3,9	24 000		HC71909E.2RSD.T.P4S.UL	0,133
31,3	49,0	67,0	7,8	6,0	24 000	38 000	HS71909C.T.P4S.UL	0,140
77,7	115,5	151,0	7,4	5,6	22 000	36 000	HS71909E.T.P4S.UL	0,140
31,0	47,0	63,0	7,8	4,2	28 000	43 000	HC71909C.T.P4S.UL	0,133
77,0	114,0	148,0	7,4	3,9	24 000	38 000	HC71909E.T.P4S.UL	0,133
31,0	47,0	63,0	12,5	4,2	38 000	56 000	XC71909C.T.P4S.UL	0,133
77,0	114,0	148,0	11,8	3,9	32 000	48 000	XC71909E.T.P4S.UL	0,133
34,0	54,0	75,0	10,0	7,5	24 000		HS7009C.2RSD.T.P4S.UL	0,270
86,0	128,0	168,0	9,4	7,1	20 000		HS7009E.2RSD.T.P4S.UL	0,270
33,5	52,0	70,0	10,0	5,3	26 000		HC7009C.2RSD.T.P4S.UL	0,260
85,0	126,0	163,5	9,4	5,0	24 000		HC7009E.2RSD.T.P4S.UL	0,260

12. Size tables



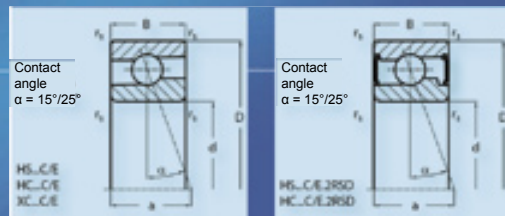
	Size of shaft (mm)					Mounting size (mm)			Preload (H)		
	d	D	B	a	r _{min}	d _{h12}	D _{H12}	r _{max}	L	M	S
45	45	75	16	16	1,0	51,0	69,0	1,0	44	132	264
	45	75	16	22	1,0	51,0	69,0	1,0	71	213	426
	45	75	16	16	1,0	51,0	69,0	1,0	30	90	180
	45	75	16	22	1,0	51,0	69,0	1,0	49	147	294
	45	75	16	16	1,0	51,0	69,0	1,0	30	90	180
	45	75	16	22	1,0	51,0	69,0	1,0	49	147	294
50	50	72	12	14	0,6	55,0	67,5	0,6	35	105	210
	50	72	12	20	0,6	55,0	67,5	0,6	58	174	348
	50	72	12	14	0,6	55,0	67,5	0,6	24	72	144
	50	72	12	20	0,6	55,0	67,5	0,6	39	117	234
	50	72	12	14	0,6	55,0	67,5	0,6	35	105	210
	50	72	12	20	0,6	55,0	67,5	0,6	58	174	348
	50	72	12	14	0,6	55,0	67,5	0,6	24	72	144
	50	72	12	20	0,6	55,0	67,5	0,6	39	117	234
	50	72	12	14	0,6	55,0	67,5	0,6	24	72	144
	50	72	12	20	0,6	55,0	67,5	0,6	39	117	234
	50	80	16	17	1,0	56,0	74,0	1,0	46	138	276
	50	80	16	23	1,0	56,0	74,0	1,0	74	222	444
	50	80	16	17	1,0	56,0	74,0	1,0	32	96	192
	50	80	16	23	1,0	56,0	74,0	1,0	51	153	306
	50	80	16	17	1,0	56,0	74,0	1,0	46	138	276
	50	80	16	23	1,0	56,0	74,0	1,0	74	222	444
	50	80	16	17	1,0	56,0	74,0	1,0	32	96	192
	50	80	16	23	1,0	56,0	74,0	1,0	51	153	306
	50	80	16	17	1,0	56,0	74,0	1,0	32	96	192
	50	80	16	23	1,0	56,0	74,0	1,0	51	153	306
55	55	80	13	16	1,0	60,0	75,5	0,6	46	138	276
	55	80	13	22	1,0	60,0	75,5	0,6	75	225	450
	55	80	13	16	1,0	60,0	75,5	0,6	32	96	192
	55	80	13	22	1,0	60,0	75,5	0,6	52	156	312

12. Size tables



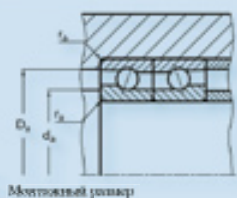
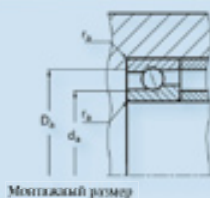
	Axial stiffness (H/um)			Payload (κH)		Limit rotational rate (rpm)		Code	Weight
	L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing	kg
	34,0	54,0	75,0	10,0	7,5	24 000	38 000	HS7009C.T.P4S.UL	0,270
	86,0	128,0	168,0	9,4	7,1	20 000	34 000	HS7009E.T.P4S.UL	0,270
	33,5	52,0	70,0	10,0	5,3	26 000	40 000	HC7009C.T.P4S.UL	0,260
	85,0	126,0	163,5	9,4	5,0	24 000	38 000	HC7009E.T.P4S.UL	0,260
	33,5	52,0	70,0	15,9	5,3	34 000	50 000	XC7009C.T.P4S.UL	0,260
	85,0	126,0	163,5	15,1	5,0	30 000	45 000	XC7009E.T.P4S.UL	0,260
	33,0	51,0	70,0	8,1	6,5	22 000		HS71910C.2RSD.T.P4S.UL	0,150
	82,0	122,0	160,0	7,6	6,1	20 000		HS71910E.2RSD.T.P4S.UL	0,150
	32,0	49,0	66,0	8,1	4,5	26 000		HC71910C.2RSD.T.P4S.UL	0,142
	81,7	120,0	156,0	7,6	4,3	22 000		HC71910E.2RSD.T.P4S.UL	0,142
	33,0	51,0	70,0	8,1	6,5	22 000	36 000	HS71910C.T.P4S.UL	0,150
	82,0	122,0	160,0	7,6	6,1	20 000	34 000	HS71910E.T.P4S.UL	0,150
	32,0	49,0	66,0	8,1	4,5	26 000	40 000	HC71910C.T.P4S.UL	0,142
	81,7	120,0	156,0	7,6	4,3	22 000	36 000	HC71910E.T.P4S.UL	0,142
	32,0	49,0	66,0	12,9	4,5	34 000	50 000	XC71910C.T.P4S.UL	0,142
	81,7	120,0	156,0	12,2	4,3	30 000	45 000	XC71910E.T.P4S.UL	0,142
	37,0	58,0	79,5	10,3	8,2	22 000		HS7010C.2RSD.T.P4S.UL	0,290
	91,0	136,0	178,0	9,8	7,7	18 000		HS7010E.2RSD.T.P4S.UL	0,290
	36,0	55,0	75,0	10,3	5,7	24 000		HC7010C.2RSD.T.P4S.UL	0,279
	91,5	134,5	174,0	9,8	5,4	22 000		HC7010E.2RSD.T.P4S.UL	0,279
	37,0	58,0	79,5	10,3	8,2	22 000	36 000	HS7010C.T.P4S.UL	0,290
	91,0	136,0	178,0	9,8	7,7	18 000	30 000	HS7010E.T.P4S.UL	0,290
	36,0	55,0	75,0	10,3	5,7	24 000	38 000	HC7010C.T.P4S.UL	0,279
	91,5	134,5	174,0	9,8	5,4	22 000	36 000	HC7010E.T.P4S.UL	0,279
	36,0	55,0	75,0	16,5	5,7	32 000	48 000	XC7010C.T.P4S.UL	0,279
	91,5	134,5	174,0	15,6	5,4	28 000	43 000	XC7010E.T.P4S.UL	0,279
	38,0	59,0	82,0	10,4	8,5	20 000		HS71911C.2RSD.T.P4S.UL	0,200
	94,0	140,0	183,0	9,8	8,1	18 000		HS71911E.2RSD.T.P4S.UL	0,200
	37,0	57,0	77,0	10,4	6,0	24 000		HC71911C.2RSD.T.P4S.UL	0,188
	93,5	138,5	179,5	9,8	5,6	20 000		HC71911E.2RSD.T.P4S.UL	0,188

12. Size tables



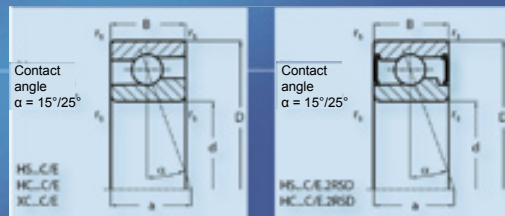
	Size of shaft (mm)					Mounting size (mm)			Preload (H)			
	d	D	B	a	r _{s,min}	d _{h12}	D _{H12}	r _{e,max}	L	M	S	
55	55	80	13	16	1,0	60,0	75,5	0,6	46	138	276	
	55	80	13	22	1,0	60,0	75,5	0,6	75	225	450	
	55	80	13	16	1,0	60,0	75,5	0,6	32	96	192	
	55	80	13	22	1,0	60,0	75,5	0,6	52	156	312	
	55	80	13	16	1,0	60,0	75,5	0,6	32	96	192	
	55	80	13	22	1,0	60,0	75,5	0,6	52	156	312	
	55	90	18	19	1,1	62,0	83,0	1,0	64	192	384	
	55	90	18	26	1,1	62,0	83,0	1,0	105	315	630	
	55	90	18	19	1,1	62,0	83,0	1,0	45	135	270	
	55	90	18	26	1,1	62,0	83,0	1,0	73	220	438	
	55	90	18	19	1,1	62,0	83,0	1,0	64	192	384	
	55	90	18	26	1,1	62,0	83,0	1,0	105	315	630	
	55	90	18	19	1,1	62,0	83,0	1,0	45	135	270	
	55	90	18	26	1,1	62,0	83,0	1,0	73	220	438	
	55	90	18	19	1,1	62,0	83,0	1,0	45	135	270	
	55	90	18	26	1,1	62,0	83,0	1,0	73	220	438	
	60	60	85	13	16	1,0	65,0	80,5	0,6	48	144	288
		60	85	13	23	1,0	65,0	80,5	0,6	78	234	468
60		85	13	16	1,0	65,0	80,5	0,6	34	102	204	
60		85	13	23	1,0	65,0	80,5	0,6	53	159	318	
60		85	13	16	1,0	65,0	80,5	0,6	48	144	288	
60		85	13	23	1,0	65,0	80,5	0,6	78	234	468	
60		85	13	16	1,0	65,0	80,5	0,6	34	102	204	
60		85	13	23	1,0	65,0	80,5	0,6	53	159	318	
60		85	13	16	1,0	65,0	80,5	0,6	34	102	204	
60		85	13	23	1,0	65,0	80,5	0,6	53	159	318	
60		95	18	19	1,1	67,0	88,0	1,0	67	201	402	
60		95	18	27	1,1	67,0	88,0	1,0	107	321	642	
60		95	18	19	1,1	67,0	88,0	1,0	46	138	276	
60		95	18	27	1,1	67,0	88,0	1,0	75	225	450	

12. Size tables



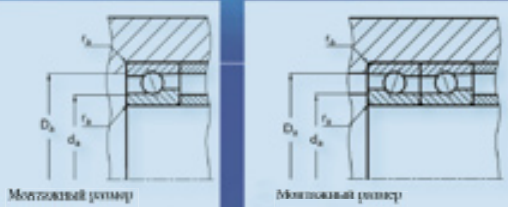
	Axial stiffness (H/um)			Payload (кН)		Limit rotational rate (rpm)		Code	Weight
	L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing	kg
	38,0	59,0	82,0	10,4	8,5	20 000	34 000	HS71911C.T.P4S.UL	0,200
	94,0	140,0	183,0	9,8	8,1	18 000	30 000	HS71911E.T.P4S.UL	0,200
	37,0	57,0	77,0	10,4	6,0	24 000	38 000	HC71911C.T.P4S.UL	0,188
	93,5	138,5	179,5	9,8	5,6	20 000	34 000	HC71911E.T.P4S.UL	0,188
	37,0	57,0	77,0	16,6	6,0	32 000	48 000	XC71911C.T.P4S.UL	0,188
	93,5	138,5	179,5	15,7	5,6	26 000	40 000	XC71911E.T.P4S.UL	0,188
	42,5	67,0	92,5	14,4	11,5	19 000		HS7011C.2RSD.T.P4S.UL	0,430
	105,0	160,0	208,0	13,6	10,9	17 000		HS7011E.2RSD.T.P4S.UL	0,430
	42,0	65,0	87,0	14,4	8,0	22 000		HC7011C.2RSD.T.P4S.UL	0,411
	107,0	158,0	204,0	13,6	7,6	19 000		HC7011E.2RSD.T.P4S.UL	0,411
	42,5	67,0	92,5	14,4	11,5	19 000	32 000	HS7011C.T.P4S.UL	0,430
	105,0	160,0	208,0	13,6	10,9	17 000	28 000	HS7011E.T.P4S.UL	0,430
	42,0	65,0	87,0	14,4	8,0	22 000	36 000	HC7011C.T.P4S.UL	0,411
	107,0	158,0	204,0	13,6	7,6	19 000	32 000	HC7011E.T.P4S.UL	0,411
	42,0	65,0	87,0	23,0	8,0	28 000	43 000	XC7011C.T.P4S.UL	0,411
	107,0	158,0	204,0	21,8	7,6	24 000	38 000	XC7011E.T.P4S.UL	0,411
	40,0	63,0	86,0	10,7	9,2	19 000		HS71912C.2RSD.T.P4S.UL	0,210
	100,0	150,0	194,0	10,1	8,7	17 000		HS71912E.2RSD.T.P4S.UL	0,210
	39,5	60,5	81,0	10,7	6,4	22 000		HC71912C.2RSD.T.P4S.UL	0,198
	99,0	146,0	189,0	10,1	6,1	19 000		HC71912E.2RSD.T.P4S.UL	0,198
	40,0	63,0	86,0	10,7	9,2	19 000	32 000	HS71912C.T.P4S.UL	0,210
	100,0	150,0	194,0	10,1	8,7	17 000	28 000	HS71912E.T.P4S.UL	0,210
	39,5	60,5	81,0	10,7	6,4	22 000	36 000	HC71912C.T.P4S.UL	0,198
	99,0	146,0	189,0	10,1	6,1	19 000	32 000	HC71912E.T.P4S.UL	0,198
	39,5	60,5	81,0	17,2	6,4	28 000	43 000	XC71912C.T.P4S.UL	0,198
	99,0	146,0	189,0	16,2	6,1	24 000	38 000	XC71912E.T.P4S.UL	0,198
	45,0	71,5	98,0	15,0	12,5	18 000		HS7012C.2RSD.T.P4S.UL	0,460
	113,0	168,0	220,0	14,1	11,8	15 000		HS7012E.2RSD.T.P4S.UL	0,460
	44,0	68,5	92,5	15,0	8,7	20 000		HC7012C.2RSD.T.P4S.UL	0,439
	112,0	166,0	216,0	14,1	8,3	18 000		HC7012E.2RSD.T.P4S.UL	0,439

12. Size tables



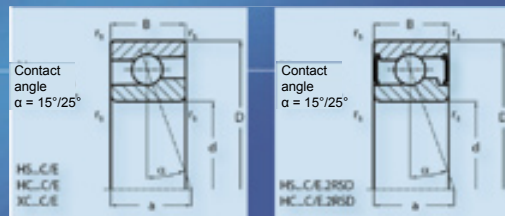
	Size of shaft (mm)					Mounting size (mm)			Preload (H)		
	d	D	B	a	$r_{s,min}$	d_{sh12}	D_{sH12}	$r_{s,max}$	L	M	S
60	60	95	18	19	1,1	67,0	88,0	1,0	67	201	402
	60	95	18	27	1,1	67,0	88,0	1,0	107	321	642
	60	95	18	19	1,1	67,0	88,0	1,0	46	138	276
	60	95	18	27	1,1	67,0	88,0	1,0	75	225	450
	60	95	18	19	1,1	67,0	88,0	1,0	46	138	276
	60	95	18	27	1,1	67,0	88,0	1,0	75	225	450
65	65	90	13	17	1,0	70,0	85,5	0,6	49	147	294
	65	90	13	25	1,0	70,0	85,5	0,6	80	240	480
	65	90	13	17	1,0	70,0	85,5	0,6	34	102	204
	65	90	13	25	1,0	70,0	85,5	0,6	55	165	330
	65	90	13	17	1,0	70,0	85,5	0,6	49	147	294
	65	90	13	25	1,0	70,0	85,5	0,6	80	240	480
	65	90	13	17	1,0	70,0	85,5	0,6	34	102	204
	65	90	13	25	1,0	70,0	85,5	0,6	55	165	330
	65	90	13	17	1,0	70,0	85,5	0,6	34	102	204
	65	90	13	25	1,0	70,0	85,5	0,6	55	165	330
	65	100	18	20	1,1	72,0	93,0	1,0	70	210	420
	65	100	18	28	1,1	72,0	93,0	1,0	112	336	672
	65	100	18	20	1,1	72,0	93,0	1,0	47	141	282
	65	100	18	28	1,1	72,0	93,0	1,0	77	231	462
	65	100	18	20	1,1	72,0	93,0	1,0	70	210	420
	65	100	18	28	1,1	72,0	93,0	1,0	112	336	672
	65	100	18	20	1,1	72,0	93,0	1,0	47	141	282
	65	100	18	28	1,1	72,0	93,0	1,0	77	231	462
65	100	18	20	1,1	72,0	93,0	1,0	47	141	282	
65	100	18	28	1,1	72,0	93,0	1,0	77	231	462	
70	70	100	16	19	1,0	76,0	94,5	0,6	64	192	384
	70	100	16	28	1,0	76,0	94,5	0,6	103	309	618
	70	100	16	19	1,0	76,0	94,5	0,6	44	132	264
	70	100	16	28	1,0	76,0	94,5	0,6	71	213	426

12. Size tables



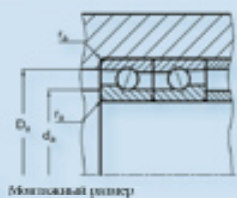
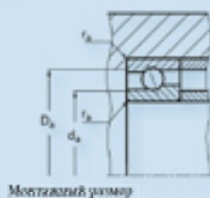
	Axial stiffness (H/um)			Payload (κH)		Limit rotational rate (rpm)		Code	Weight
	L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing	kg
	45,0	71,5	98,0	15,0	12,5	18000	30000	HS7012C.T.P4S.UL	0,460
	113,0	168,0	220,0	14,1	11,8	15000	24000	HS7012E.T.P4S.UL	0,460
	44,0	68,5	92,5	15,0	8,7	20000	34000	HC7012C.T.P4S.UL	0,439
	112,0	166,0	216,0	14,1	8,3	18000	30000	HC7012E.T.P4S.UL	0,439
	44,0	68,5	92,5	23,9	8,7	28000	43000	XC7012C.T.P4S.UL	0,439
	112,0	166,0	216,0	22,6	8,3	24000	38000	XC7012E.T.P4S.UL	0,439
	41,5	65,5	90,0	11,0	9,9	18000		HS71913C.2RSD.T.P4S.UL	0,230
	105,0	156,0	202,0	10,4	9,3	15000		HS71913E.2RSD.T.P4S.UL	0,230
	41,0	63,0	85,0	11,0	6,9	20000		HC71913C.2RSD.T.P4S.UL	0,217
	104,0	154,0	199,0	10,4	6,5	18000		HC71913E.2RSD.T.P4S.UL	0,217
	41,5	65,5	90,0	11,0	9,9	18000	30000	HS71913C.T.P4S.UL	0,230
	105,0	156,0	202,0	10,4	9,3	15000	24000	HS71913E.T.P4S.UL	0,230
	41,0	63,0	85,0	11,0	6,9	20000	34000	HC71913C.T.P4S.UL	0,217
	104,0	154,0	199,0	10,4	6,5	18000	30000	HC71913E.T.P4S.UL	0,217
	41,0	63,0	85,0	17,6	6,9	26000	43000	XC71913C.T.P4S.UL	0,217
	104,0	154,0	199,0	16,6	6,5	24000	38000	XC71913E.T.P4S.UL	0,217
	48,0	76,0	104,0	15,5	13,5	17000		HS7013C.2RSD.T.P4S.UL	0,480
	120,0	178,0	233,0	14,6	12,7	15000		HS7013E.2RSD.T.P4S.UL	0,480
	46,0	72,0	97,0	15,5	9,4	20000		HC7013C.2RSD.T.P4S.UL	0,458
	119,0	176,0	225,0	14,6	8,9	17000		HC7013E.2RSD.T.P4S.UL	0,458
	48,0	76,0	104,0	15,5	13,5	17000	28000	HS7013C.T.P4S.UL	0,480
	120,0	178,0	233,0	14,6	12,7	15000	24000	HS7013E.T.P4S.UL	0,480
	46,0	72,0	97,0	15,5	9,4	20000	34000	HC7013C.T.P4S.UL	0,458
	119,0	176,0	225,0	14,6	8,9	17000	28000	HC7013E.T.P4S.UL	0,458
	46,0	72,0	97,0	24,7	9,4	26000	40000	XC7013C.T.P4S.UL	0,458
	119,0	176,0	225,0	23,3	8,9	22000	36000	XC7013E.T.P4S.UL	0,458
	48,0	75,0	103,0	14,3	12,9	16000		HS71914C.2RSD.T.P4S.UL	0,370
	120,0	177,0	230,0	13,4	12,2	14000		HS71914E.2RSD.T.P4S.UL	0,370
	47,0	72,0	96,0	14,3	9,1	19000		HC71914C.2RSD.T.P4S.UL	0,350
	118,0	175,0	227,0	13,4	8,6	16000		HC71914E.2RSD.T.P4S.UL	0,350

12. Size tables



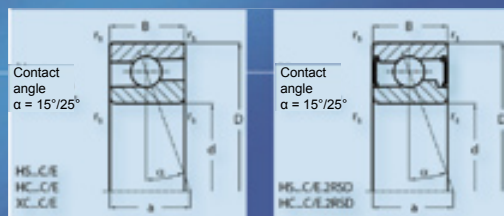
	Size of shaft (mm)					Mounting size (mm)			Preload (H)			
	d	D	B	a	r _s min	d ₁ H12	D ₁ H12	r _s max	L	M	S	
70	70	100	16	19	1,0	76,0	94,5	0,6	64	192	384	
	70	100	16	28	1,0	76,0	94,5	0,6	103	309	618	
	70	100	16	19	1,0	76,0	94,5	0,6	44	132	264	
	70	100	16	28	1,0	76,0	94,5	0,6	71	213	426	
	70	100	16	19	1,0	76,0	94,5	0,6	44	132	264	
	70	100	16	28	1,0	76,0	94,5	0,6	71	213	426	
	70	110	20	22	1,1	77,0	102,0	1,0	89	267	534	
	70	110	20	31	1,1	77,0	102,0	1,0	146	438	876	
	70	110	20	22	1,1	77,0	102,0	1,0	63	189	378	
	70	110	20	31	1,1	77,0	102,0	1,0	101	303	606	
	70	110	20	22	1,1	77,0	102,0	1,0	89	267	534	
	70	110	20	31	1,1	77,0	102,0	1,0	146	438	876	
	70	110	20	22	1,1	77,0	102,0	1,0	63	189	378	
	70	110	20	31	1,1	77,0	102,0	1,0	101	303	606	
	70	110	20	22	1,1	77,0	102,0	1,0	63	189	378	
	70	110	20	31	1,1	77,0	102,0	1,0	101	303	606	
	75	75	105	16	20	1,0	81,0	99,5	0,6	65	195	390
		75	105	16	29	1,0	81,0	99,5	0,6	105	310	630
75		105	16	20	1,0	81,0	99,5	0,6	45	133	265	
75		105	16	29	1,0	81,0	99,5	0,6	72	220	435	
75		105	16	20	1,0	81,0	99,5	0,6	65	195	390	
75		105	16	29	1,0	81,0	99,5	0,6	105	310	630	
75		105	16	20	1,0	81,0	99,5	0,6	45	133	265	
75		105	16	29	1,0	81,0	99,5	0,6	72	220	435	
75		105	16	20	1,0	81,0	99,5	0,6	45	133	265	
75		105	16	29	1,0	81,0	99,5	0,6	72	220	435	
75		115	20	23	1,1	82,0	107,0	1,0	91	273	546	
75		115	20	32	1,1	82,0	107,0	1,0	148	444	888	
75		115	20	23	1,1	82,0	107,0	1,0	64	192	378	
75		115	20	32	1,1	82,0	107,0	1,0	102	306	610	

12. Size tables



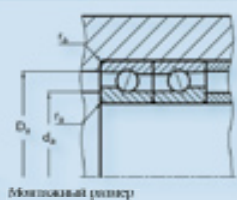
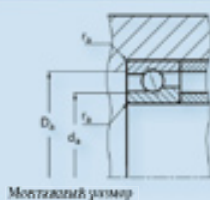
	Axial stiffness (H/um)			Payload (кН)		Limit rotational rate (rpm)		Code	Weight
	L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing	kg
	48,0	75,0	103,0	14,3	12,9	16 000	26 000	HS71914C.T.P4S.UL	0,370
	120,0	177,0	230,0	13,4	12,2	14 000	22 000	HS71914E.T.P4S.UL	0,370
	47,0	72,0	96,0	14,3	9,1	19 000	32 000	HC71914C.T.P4S.UL	0,350
	118,0	175,0	227,0	13,4	8,6	16 000	26 000	HC71914E.T.P4S.UL	0,350
	47,0	72,0	96,0	22,8	9,1	24 000	40 000	XC71914C.T.P4S.UL	0,350
	118,0	175,0	227,0	21,5	8,6	22 000	36 000	XC71914E.T.P4S.UL	0,350
	53,0	82,5	114,0	20,0	17,2	16 000		HS7014C.2RSD.T.P4S.UL	0,670
	132,0	197,0	257,0	18,9	16,3	13 000		HS7014E.2RSD.T.P4S.UL	0,670
	52,0	80,0	107,5	20,0	12,1	18 000		HC7014C.2RSD.T.P4S.UL	0,636
	131,6	195,0	252,0	18,9	11,4	15 000		HC7014E.2RSD.T.P4S.UL	0,636
	53,0	82,5	114,0	20,0	17,2	16 000	26 000	HS7014C.T.P4S.UL	0,670
	132,0	197,0	257,0	18,9	16,3	13 000	20 000	HS7014E.T.P4S.UL	0,670
	52,0	80,0	107,5	20,0	12,1	18 000	30 000	HC7014C.T.P4S.UL	0,636
	131,6	195,0	252,0	18,9	11,4	15 000	24 000	HC7014E.T.P4S.UL	0,636
	52,0	80,0	107,5	32,0	12,1	24 000	38 000	XC7014C.T.P4S.UL	0,636
	131,6	195,0	252,0	30,3	11,4	20 000	34 000	XC7014E.T.P4S.UL	0,636
	50,1	78,2	106,8	14,7	13,8	16 000		HS71915C.2RSD.T.P4S.UL	0,400
	125,0	185,0	240,5	13,8	13,0	13 000		HS71915E.2RSD.T.P4S.UL	0,400
	48,6	75,1	100,6	14,7	9,7	18 000		HC71915C.2RSD.T.P4S.UL	0,379
	124,5	185,4	238,0	13,8	9,1	15 000		HC71915E.2RSD.T.P4S.UL	0,379
	50,1	78,2	106,8	14,7	13,8	16 000	26 000	HS71915C.T.P4S.UL	0,400
	125,0	185,0	240,5	13,8	13,0	13 000	20 000	HS71915E.T.P4S.UL	0,400
	48,6	75,1	100,6	14,7	9,7	18 000	30 000	HC71915C.T.P4S.UL	0,379
	124,5	185,4	238,0	13,8	9,1	15 000	24 000	HC71915E.T.P4S.UL	0,379
	48,6	75,1	100,6	23,4	9,7	23 000	40 000	XC71915C.T.P4S.UL	0,379
	124,5	185,4	238,0	22,1	9,1	19 000	32 000	XC71915E.T.P4S.UL	0,379
	55,0	86,0	117,0	20,3	17,9	15 000		HS7015C.2RSD.T.P4S.UL	0,710
	136,0	202,0	262,0	19,1	17,0	13 000		HS7015E.2RSD.T.P4S.UL	0,710
	54,0	82,0	110,0	20,3	12,6	17 000		HC7015C.2RSD.T.P4S.UL	0,675
	134,0	199,0	257,0	19,1	11,9	15 000		HC7015E.2RSD.T.P4S.UL	0,675

12. Size tables



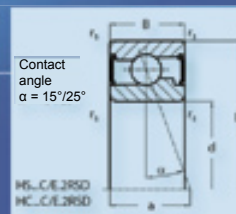
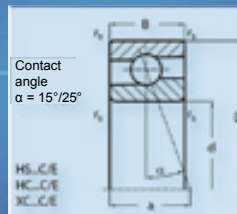
	Size of shaft (mm)					Mounting size (mm)			Preload (H)		
	d	D	B	a	r _s min	d ₂ h12	D ₂ H12	r _s max	L	M	S
75	75	115	20	23	1,1	82,0	107,0	1,0	91	273	546
	75	115	20	32	1,1	82,0	107,0	1,0	148	444	888
	75	115	20	23	1,1	82,0	107,0	1,0	64	192	378
	75	115	20	32	1,1	82,0	107,0	1,0	102	306	610
	75	115	20	23	1,1	82,0	107,0	1,0	64	192	378
	75	115	20	32	1,1	82,0	107,0	1,0	102	306	610
80	80	110	16	21	1,0	86,0	104,0	0,6	73	219	438
	80	110	16	30	1,0	86,0	104,0	0,6	117	351	702
	80	110	16	21	1,0	86,0	104,0	0,6	50	150	300
	80	110	16	30	1,0	86,0	104,0	0,6	81	243	486
	80	110	16	21	1,0	86,0	104,0	0,6	73	219	438
	80	110	16	30	1,0	86,0	104,0	0,6	117	351	702
	80	110	16	21	1,0	86,0	104,0	0,6	50	150	300
	80	110	16	30	1,0	86,0	104,0	0,6	81	243	486
	80	110	16	21	1,0	86,0	104,0	0,6	50	150	300
	80	110	16	30	1,0	86,0	104,0	0,6	81	243	486
	80	125	22	25	1,1	88,0	117,0	1,0	109	327	654
	80	125	22	35	1,1	88,0	117,0	1,0	175	525	1050
	80	125	22	25	1,1	88,0	117,0	1,0	74	222	444
	80	125	22	35	1,1	88,0	117,0	1,0	123	369	738
	80	125	22	25	1,1	88,0	117,0	1,0	109	327	654
	80	125	22	35	1,1	88,0	117,0	1,0	175	525	1050
	80	125	22	25	1,1	88,0	117,0	1,0	74	222	444
	80	125	22	35	1,1	88,0	117,0	1,0	123	369	738
80	125	22	25	1,1	88,0	117,0	1,0	74	222	444	
80	125	22	35	1,1	88,0	117,0	1,0	123	369	738	
85	85	120	18	23	1,1	92,0	114,0	0,6	76	228	456
	85	120	18	33	1,1	92,0	114,0	0,6	123	369	738
	85	120	18	23	1,1	92,0	114,0	0,6	53	159	318
	85	120	18	33	1,1	92,0	114,0	0,6	84	252	504

12. Size tables



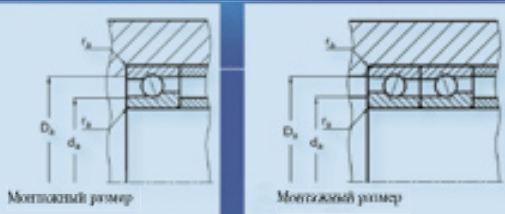
	Axial stiffness (H/um)			Payload (кН)		Limit rotational rate (rpm)		Code	Weight
	L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing	kg
							л0		
	55,0	86,0	117,0	20,3	17,9	15000	24000	HS7015C.T.P4S.UL	0,710
	136,0	202,0	262,0	19,1	17,0	13000	20000	HS7015E.T.P4S.UL	0,710
	54,0	82,0	110,0	20,3	12,6	17000	28000	HC7015C.T.P4S.UL HC7015E.T.P4S.UL	0,675
	134,0	199,0	257,0	19,1	11,9	15000	24000	XC7015C.T.P4S.UL	0,675
	54,0	82,0	110,0	32,5	12,6	22000	36000	XC7015E.T.P4S.UL	0,675
	134,0	199,0	257,0	30,6	11,9	19000	32000		0,675
	53,0	83,0	113,0	16,3	15,5	15000		HS71916C.2RSD.T.P4S.UL	0,410
	132,0	196,0	256,0	15,4	14,6	13000		HS71916E.2RSD.T.P4S.UL	0,410
	52,0	79,0	106,0	16,3	10,8	17000		HC71916C.2RSD.T.P4S.UL	0,385
	130,0	194,0	251,0	15,4	10,2	15000		HC71916E.2RSD.T.P4S.UL	0,385
	53,0	83,0	113,0	16,3	15,5	15000	24000	HS71916C.T.P4S.UL	0,410
	132,0	196,0	256,0	15,4	14,6	13000	20000	HS71916E.T.P4S.UL	0,410
	52,0	79,0	106,0	16,3	10,8	17000	28000	HC71916C.T.P4S.UL	0,385
	130,0	194,0	251,0	15,4	10,2	15000	24000	HC71916E.T.P4S.UL	0,385
	52,0	79,0	106,0	26,1	10,8	22000	36000	XC71916C.T.P4S.UL	0,385
	130,0	194,0	251,0	24,6	10,2	19000	32000	XC71916E.T.P4S.UL	0,385
	59,0	93,0	128,0	24,4	21,8	14000		HS7016C.2RSD.T.P4S.UL	0,960
	148,0	220,0	288,0	23,1	20,6	12000		HS7016E.2RSD.T.P4S.UL	0,960
	57,0	88,0	119,0	24,4	15,2	16000		HC7016C.2RSD.T.P4S.UL	0,915
	147,0	218,0	283,0	23,1	14,4	13000		HC7016E.2RSD.T.P4S.UL	0,192
	59,0	93,0	128,0	24,4	21,8	14000	22000	HS7016C.T.P4S.UL	0,960
	148,0	220,0	288,0	23,1	20,6	12000	19000	HS7016E.T.P4S.UL	0,960
	57,0	88,0	119,0	24,4	15,2	16000	26000	HC7016C.T.P4S.UL	0,915
	147,0	218,0	283,0	23,1	14,4	13000	20000	HC7016E.T.P4S.UL	0,915
	57,0	88,0	119,0	39,1	15,2	20000	34000	XC7016C.T.P4S.UL	0,915
	147,0	218,0	283,0	36,9	14,4	17000	28000	XC7016E.T.P4S.UL	0,915
	58,0	89,0	121,0	17,0	17,0	14000		HS71917C.2RSD.T.P4S.UL	0,610
	142,0	210,0	274,0	16,0	16,0	12000		HS71917E.2RSD.T.P4S.UL	0,610
	56,0	85,0	115,0	17,0	11,9	16000		HC71917C.2RSD.T.P4S.UL	0,582
	141,0	207,5	269,0	16,0	11,2	13000		HC71917E.2RSD.T.P4S.UL	0,582

12. Size tables



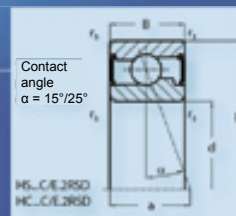
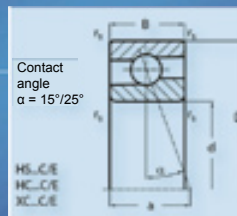
	Size of shaft (mm)					Mounting size (mm)			Preload (H)		
	d	D	B	a	r _{min}	d _{h12}	D _{H12}	r _{max}	L	M	S
85	85	120	18	23	1,1	92,0	114,0	0,6	76	228	456
	85	120	18	33	1,1	92,0	114,0	0,6	123	369	738
	85	120	18	23	1,1	92,0	114,0	0,6	53	159	318
	85	120	18	33	1,1	92,0	114,0	0,6	84	252	504
	85	120	18	23	1,1	92,0	114,0	0,6	53	159	318
	85	120	18	33	1,1	92,0	114,0	0,6	84	252	504
	85	130	22	25	1,1	93,0	122,0	1,0	109	327	654
	85	130	22	36	1,1	93,0	122,0	1,0	178	534	1068
	85	130	22	25	1,1	93,0	122,0	1,0	76	228	456
	85	130	22	36	1,1	93,0	122,0	1,0	123	369	738
	85	130	22	25	1,1	93,0	122,0	1,0	109	327	654
	85	130	22	36	1,1	93,0	122,0	1,0	178	534	1068
90	90	125	18	23	1,1	97,0	119,0	0,6	83	249	498
	90	125	18	34	1,1	97,0	119,0	0,6	133	399	798
	90	125	18	23	1,1	97,0	119,0	0,6	57	171	342
	90	125	18	34	1,1	97,0	119,0	0,6	92	276	552
	90	125	18	23	1,1	97,0	119,0	0,6	83	249	498
	90	125	18	34	1,1	97,0	119,0	0,6	133	399	798
	90	125	18	23	1,1	97,0	119,0	0,6	57	171	342
	90	125	18	34	1,1	97,0	119,0	0,6	92	276	552
	90	125	18	23	1,1	97,0	119,0	0,6	57	171	342
	90	125	18	34	1,1	97,0	119,0	0,6	92	276	552
	90	140	24	27	1,5	100,0	131,0	1,5	130	390	780
	90	140	24	39	1,5	100,0	131,0	1,5	207	621	1242
90	140	24	27	1,5	100,0	131,0	1,5	89	267	534	
90	140	24	39	1,5	100,0	131,0	1,5	146	438	876	

12. Size tables



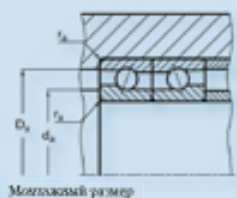
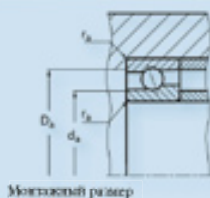
	Axial stiffness (H/um)			Payload (кН)		Limit rotational rate (rpm)		Code	Weight
	L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing	kg
	58,0	89,0	121,0	17,0	17,0	14 000	22 000	HS71917C.T.P4S.UL	0,610
	142,0	210,0	274,0	16,0	16,0	12 000	19 000	HS71917E.T.P4S.UL	0,610
	56,0	85,0	115,0	17,0	11,9	16 000	26 000	HC71917C.T.P4S.UL	0,582
	141,0	207,5	269,0	16,0	11,2	13 000	20 000	HC71917E.T.P4S.UL	0,582
	56,0	85,0	115,0	27,1	11,9	20 000	34 000	XC71917C.T.P4S.UL	0,582
	141,0	207,5	269,0	25,6	11,2	17 000	28 000	XC71917E.T.P4S.UL	0,582
	61,0	95,0	130,0	24,6	22,6	13 000		HS7017C.2RSD.T.P4S.UL	0,990
	152,0	225,0	295,0	23,2	21,4	11 000		HS7017E.2RSD.T.P4S.UL	0,990
	60,0	92,0	123,0	24,6	15,8	15 000		HC7017C.2RSD.T.P4S.UL	0,942
	152,0	224,0	289,0	23,2	15,0	13 000		HC7017E.2RSD.T.P4S.UL	0,942
	61,0	95,0	130,0	24,6	22,6	13 000	20 000	HS7017C.T.P4S.UL	0,990
	152,0	225,0	295,0	23,2	21,4	11 000	18 000	HS7017E.T.P4S.UL	0,990
	60,0	92,0	123,0	24,6	15,8	15 000	24 000	HC7017C.T.P4S.UL	0,942
	152,0	224,0	289,0	23,2	15,0	13 000	20 000	HC7017E.T.P4S.UL	0,942
	60,0	92,0	123,0	39,3	15,8	19 000	32 000	XC7017C.T.P4S.UL	0,942
	152,0	224,0	289,0	37,1	15,0	16 000	26 000	XC7017E.T.P4S.UL	0,942
	58,0	91,0	125,0	18,6	18,7	13 000		HS71918C.2RSD.T.P4S.UL	0,630
	146,0	215,0	280,0	17,7	17,7	11 000		HS71918E.2RSD.T.P4S.UL	0,630
	56,0	87,0	117,0	18,6	13,1	15 000		HC71918C.2RSD.T.P4S.UL	0,598
	145,0	215,0	277,0	17,7	12,4	13 000		HC71918E.2RSD.T.P4S.UL	0,598
	58,0	91,0	125,0	18,6	18,7	13 000	20 000	HS71918C.T.P4S.UL	0,630
	146,0	215,0	280,0	17,7	17,7	11 000	18 000	HS71918E.T.P4S.UL	0,630
	56,0	87,0	117,0	18,6	13,1	15 000	24 000	HC71918C.T.P4S.UL	0,598
	145,0	215,0	277,0	17,7	12,4	13 000	20 000	HC71918E.T.P4S.UL	0,598
	56,0	87,0	117,0	29,7	13,1	19 000	32 000	XC71918C.T.P4S.UL	0,598
	145,0	215,0	277,0	28,3	12,4	16 000	26 000	XC71918E.T.P4S.UL	0,598
	66,0	104,0	142,0	28,7	26,6	12 000		HS7018C.2RSD.T.P4S.UL	1,31
	165,0	245,0	318,0	27,1	25,1	10 000		HS7018E.2RSD.T.P4S.UL	1,31
	64,0	99,5	133,5	28,7	18,6	14 000		HC7018C.2RSD.T.P4S.UL	1,25
	165,0	245,0	315,0	27,1	17,6	12 000		HC7018E.2RSD.T.P4S.UL	1,25

12. Size tables



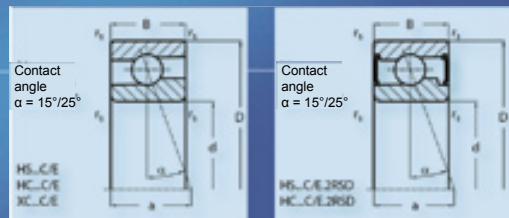
	Size of shaft (mm)					Mounting size (mm)			Preload (H)			
	d	D	B	a	r _{min}	d _{h12}	D _{H12}	r _{max}	L	M	S	
90	90	140	24	27	1,5	100,0	131,0	1,5	130	390	780	
	90	140	24	39	1,5	100,0	131,0	1,5	207	621	1242	
	90	140	24	27	1,5	100,0	131,0	1,5	89	267	534	
	90	140	24	39	1,5	100,0	131,0	1,5	146	438	876	
	90	140	24	27	1,5	100,0	131,0	1,5	89	267	534	
	90	140	24	39	1,5	100,0	131,0	1,5	146	438	876	
95	95	130	18	24	1,1	102,0	124,0	0,6	85	255	509	
	95	130	18	35	1,1	102,0	124,0	0,6	138	414	828	
	95	130	18	24	1,1	102,0	124,0	0,6	59	177	354	
	95	130	18	35	1,1	102,0	124,0	0,6	96	288	575	
	95	130	18	24	1,1	102,0	124,0	0,6	85	255	509	
	95	130	18	35	1,1	102,0	124,0	0,6	138	414	828	
	95	130	18	24	1,1	102,0	124,0	0,6	59	177	354	
	95	130	18	35	1,1	102,0	124,0	0,6	96	288	575	
	95	130	18	24	1,1	102,0	124,0	0,6	59	177	354	
	95	130	18	35	1,1	102,0	124,0	0,6	96	288	575	
	95	145	24	28	1,5	105,0	136,0	1,5	130	390	780	
	95	145	24	40	1,5	105,0	136,0	1,5	211	633	1266	
	95	145	24	28	1,5	105,0	136,0	1,5	89	267	534	
	95	145	24	40	1,5	105,0	136,0	1,5	146	438	876	
	95	145	24	28	1,5	105,0	136,0	1,5	130	390	780	
	95	145	24	40	1,5	105,0	136,0	1,5	211	633	1266	
	95	145	24	28	1,5	105,0	136,0	1,5	89	267	534	
	95	145	24	40	1,5	105,0	136,0	1,5	146	438	876	
	95	145	24	28	1,5	105,0	136,0	1,5	89	267	534	
	95	145	24	40	1,5	105,0	136,0	1,5	146	438	876	
	100	100	140	20	26	1,1	107,0	133,0	0,6	102	306	612
		100	140	20	38	1,1	107,0	133,0	0,6	166	498	996
		100	140	20	26	1,1	107,0	133,0	0,6	70	210	420
		100	140	20	38	1,1	107,0	133,0	0,6	115	345	690

12. Size tables



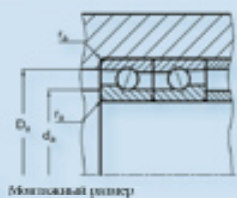
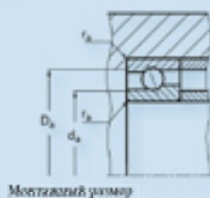
	Axial stiffness (H/um)			Payload (кН)		Limit rotational rate (rpm)		Code	Weight
	L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing	kg
	66,0	104,0	142,0	28,7	26,6	12000	19000	HS7018C.T.P4S.UL	1,31
	165,0	245,0	318,0	27,1	25,1	10000	17000	HS7018E.T.P4S.UL HC7018C.T.P4S.UL	1,31
	64,0	99,5	133,5	28,7	18,6	14000	22000	HC7018E.T.P4S.UL	1,25
	165,0	245,0	315,0	27,1	17,6	12000	19000	XC7018C.T.P4S.UL	1,25
	64,0	99,5	133,5	45,9	18,6	18000	30000	XC7018E.T.P4S.UL	1,25
	165,0	245,0	315,0	43,3	17,6	15000	24000		1,25
	60,8	94,8	129,4	19,1	19,8	12000		HS71919C.2RSD.T.P4S.UL	0,660
	152,8	226,9	295,0	18,0	18,7	10000		HS71919E.2RSD.T.P4S.UL	0,660
	59,7	91,4	122,5	19,1	13,9	14000		HC71919C.2RSD.T.P4S.UL	0,626
	153,1	225,5	290,4	18,0	13,1	12000		HC71919E.2RSD.T.P4S.UL	0,626
	60,8	94,8	129,4	19,1	19,8	12000	19000	HS71919C.T.P4S.UL	0,660
	152,8	226,9	295,0	18,0	18,7	10000	17000	HS71919E.T.P4S.UL	0,660
	59,7	91,4	122,5	19,1	13,9	14000	22000	HC71919C.T.P4S.UL	0,626
	153,1	225,5	290,4	18,0	13,1	12000	19000	HC71919E.T.P4S.UL	0,626
	59,7	91,4	122,5	30,5	13,9	18000	30000	XC71919C.T.P4S.UL	0,626
	153,1	225,5	290,4	28,7	13,1	16000	26000	XC71919E.T.P4S.UL	0,626
	67,5	105,0	144,0	29,1	27,6	11000		HS7019C.2RSD.T.P4S.UL	1,34
	170,0	252,0	328,0	27,4	26,1	9500		HS7019E.2RSD.T.P4S.UL	1,34
	65,0	101,0	135,0	29,1	19,3	13000		HC7019C.2RSD.T.P4S.UL	1,28
	169,0	249,0	321,0	27,4	18,3	11000		HC7019E.2RSD.T.P4S.UL	1,28
	67,5	105,0	144,0	29,1	27,6	11000	18000	HS7019C.T.P4S.UL	1,34
	170,0	252,0	328,0	27,4	26,1	9500	16000	HS7019E.T.P4S.UL HC7019C.T.P4S.UL	1,34
	65,0	101,0	135,0	29,1	19,3	13000	20000	HC7019E.T.P4S.UL	1,28
	169,0	249,0	321,0	27,4	18,3	11000	18000	XC7019C.T.P4S.UL	1,28
	65,0	101,0	135,0	46,5	19,3	17000	28000	XC7019E.T.P4S.UL	1,28
	169,0	249,0	321,0	43,9	18,3	14000	22000		1,28
	66,0	102,5	140,0	22,7	23,5	11000		HS71920C.2RSD.T.P4S.UL	0,900
	166,0	245,0	320,0	21,4	22,1	9500		HS71920E.2RSD.T.P4S.UL	0,900
	64,0	98,0	131,0	22,7	16,4	13000		HC71920C.2RSD.T.P4S.UL	0,855
	164,0	243,0	314,0	21,4	15,5	11000		HC71920E.2RSD.T.P4S.UL	0,855

12. Size tables



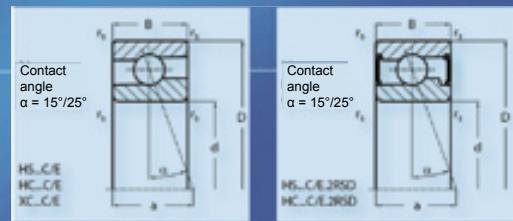
	Size of shaft (mm)					Mounting size (mm)			Preload (H)		
	d	D	B	a	$r_{s,min}$	$d_s h_{12}$	$D_s H_{12}$	$r_{s,max}$	L	M	S
100	100	140	20	26	1,1	107,0	133,0	0,6	102	306	612
	100	140	20	38	1,1	107,0	133,0	0,6	166	498	996
	100	140	20	26	1,1	107,0	133,0	0,6	70	210	420
	100	140	20	38	1,1	107,0	133,0	0,6	115	345	690
	100	140	20	26	1,1	107,0	133,0	0,6	70	210	420
	100	140	20	38	1,1	107,0	133,0	0,6	115	345	690
	100	150	24	29	1,5	110,0	141,0	1,5	134	402	804
	100	150	24	41	1,5	110,0	141,0	1,5	215	645	1290
	100	150	24	29	1,5	110,0	141,0	1,5	91	273	546
	100	150	24	41	1,5	110,0	141,0	1,5	148	444	888
	100	150	24	29	1,5	110,0	141,0	1,5	134	402	804
	100	150	24	41	1,5	110,0	141,0	1,5	215	645	1290
105	105	145	20	27	1,1	112,0	138,0	0,6	104	312	624
	105	145	20	39	1,1	112,0	138,0	0,6	169	507	1014
	105	145	20	27	1,1	112,0	138,0	0,6	71	213	426
	105	145	20	39	1,1	112,0	138,0	0,6	117	351	702
	105	145	20	27	1,1	112,0	138,0	0,6	71	213	426
	105	145	20	39	1,1	112,0	138,0	0,6	117	351	702
	105	160	26	31	2,0	116,0	150,0	2,0	170	510	1020
	105	160	26	44	2,0	116,0	150,0	2,0	276	828	1656
	105	160	26	31	2,0	116,0	150,0	2,0	118	354	708
	105	160	26	44	2,0	116,0	150,0	2,0	192	576	1152
	105	160	26	31	2,0	116,0	150,0	2,0	118	354	708
	105	160	26	44	2,0	116,0	150,0	2,0	192	576	1152
110	110	150	20	27	1,1	117,0	143,0	0,6	121	363	726
	110	150	20	40	1,1	117,0	143,0	0,6	196	588	1175
	110	150	20	27	1,1	117,0	143,0	0,6	83	249	498
	110	150	20	40	1,1	117,0	143,0	0,6	135	405	810
	110	150	20	27	1,1	117,0	143,0	0,6	83	249	498
	110	150	20	40	1,1	117,0	143,0	0,6	135	405	810

12. Size tables



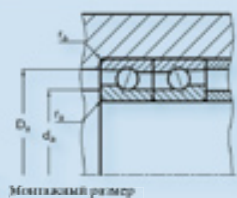
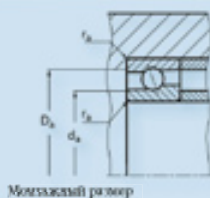
	Axial stiffness (H/um)			Payload (кН)		Limit rotational rate (rpm)		Code	Weight
	L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing 1	kg
	66,0	102,5	140,0	22,7	23,5	11 000	18 000	HS71920C.T.P4S.UL	0,900
	166,0	245,0	320,0	21,4	22,1	9 500	16 000	HS71920E.T.P4S.UL	0,900
	64,0	98,0	131,0	22,7	16,4	13 000	20 000	HC71920C.T.P4S.UL	0,855
	164,0	243,0	314,0	21,4	15,5	11 000	18 000	HC71920E.T.P4S.UL	0,855
	64,0	98,0	131,0	36,3	16,4	17 000	28 000	XC71920C.T.P4S.UL	0,855
	164,0	243,0	314,0	34,2	15,5	14 000	22 000	XC71920E.T.P4S.UL	0,855
	70,0	109,0	149,5	29,4	28,6	11 000		HS7020C.2RSD.T.P4S.UL	1,40
	174,0	259,0	335,0	27,8	27,0	9 000		HS7020E.2RSD.T.P4S.UL	1,40
	67,0	104,0	138,5	29,4	20,0	12 000		HC7020C.2RSD.T.P4S.UL	1,33
	173,0	255,0	330,0	27,8	18,9	11 000		HC7020E.2RSD.T.P4S.UL	1,33
	70,0	109,0	149,5	29,4	28,6	11 000	18 000	HS7020C.T.P4S.UL	1,40
	174,0	259,0	335,0	27,8	27,0	9 000	15 000	HS7020E.T.P4S.UL	1,40
	67,0	104,0	138,5	29,4	20,0	12 000	19 000	HC7020C.T.P4S.UL	1,33
	173,0	255,0	330,0	27,8	18,9	11 000	18 000	HC7020E.T.P4S.UL	1,33
	67,0	104,0	138,5	47,1	20,0	16 000	26 000	XC7020C.T.P4S.UL	1,33
	173,0	255,0	330,0	44,4	18,9	14 000	22 000	XC7020E.T.P4S.UL	1,33
	68,0	106,5	145,0	22,9	24,2	11 000	18 000	HS71921C.T.P4S.UL	0,900
	172,0	255,0	332,0	21,5	22,8	9 000	15 000	HS71921E.T.P4S.UL	0,900
	67,0	102,0	137,0	22,9	16,9	12 000	19 000	HC71921C.T.P4S.UL	0,850
	171,0	253,0	327,0	21,5	16,0	11 000	18 000	HC71921E.T.P4S.UL	0,850
	67,0	102,0	137,0	36,6	16,9	16 000	26 000	XC71921C.T.P4S.UL	0,850
	171,0	253,0	327,0	34,5	16,0	14 000	22 000	XC71921E.T.P4S.UL	0,850
	76,0	120,0	162,0	38,3	36,4	10 000	17 000	HS7021C.T.P4S.UL	1,80
	190,0	285,0	369,0	36,1	34,4	8 500	14 000	HS7021E.T.P4S.UL	1,80
	74,0	114,0	152,0	38,3	25,4	12 000	19 000	HC7021C.T.P4S.UL	1,70
	190,0	280,0	363,0	36,1	24,0	10 000	17 000	HC7021E.T.P4S.UL	1,70
	74,0	114,0	152,0	61,3	25,4	15 000	24 000	XC7021C.T.P4S.UL	1,70
	190,0	280,0	363,0	57,8	24,0	13 000	21 000	XC7021E.T.P4S.UL	1,70
	71,0	112,0	152,0	27,1	28,5	10 000	17 000	HS71922C.T.P4S.UL	1,00
	180,0	268,0	349,0	25,6	26,8	8 500	14 000	HS71922E.T.P4S.UL	1,00
	70,0	107,0	144,0	27,1	19,9	12 000	19 000	HC71922C.T.P4S.UL	0,940
	180,0	265,0	340,0	25,6	18,8	10 000	17 000	HC71922E.T.P4S.UL	0,940
	70,0	107,0	144,0	43,4	19,9	15 000	24 000	XC71922C.T.P4S.UL	0,940
	180,0	265,0	340,0	40,9	18,8	13 000	20 000	XC71922E.T.P4S.UL	0,940

12. Size tables



	Size of shaft (mm)				Mounting size (mm)				Preload (H)		
	d	D	B	a	r _s min	d _s h12	D _s H12	r _s max	L	M	S
110	110	170	28	33	2,0	121,0	159,0	2,0	174	522	1044
	110	170	28	47	2,0	121,0	159,0	2,0	280	840	1680
	110	170	28	33	2,0	121,0	159,0	2,0	118	354	708
	110	170	28	47	2,0	121,0	159,0	2,0	192	576	1152
	110	170	28	33	2,0	121,0	159,0	2,0	118	354	708
	110	170	28	47	2,0	121,0	159,0	2,0	192	576	1152
120	120	165	22	30	1,1	128,0	157,0	0,6	127	381	762
	120	165	22	44	1,1	128,0	157,0	0,6	207	621	1242
	120	165	22	30	1,1	128,0	157,0	0,6	88	264	528
	120	165	22	44	1,1	128,0	157,0	0,6	143	429	858
	120	165	22	30	1,1	128,0	157,0	0,6	88	264	528
	120	165	22	44	1,1	128,0	157,0	0,6	143	429	858
120	120	180	28	34	2,0	131,0	169,0	2,0	179	537	1074
	120	180	28	49	2,0	131,0	169,0	2,0	288	864	1728
	120	180	28	34	2,0	131,0	169,0	2,0	123	369	738
	120	180	28	49	2,0	131,0	169,0	2,0	199	597	1194
	120	180	28	34	2,0	131,0	169,0	2,0	123	369	738
	120	180	28	49	2,0	131,0	169,0	2,0	199	597	1194
130	130	180	24	33	1,5	139,0	171,0	0,6	145	435	870
	130	180	24	48	1,5	139,0	171,0	0,6	238	714	1428
	130	180	24	33	1,5	139,0	171,0	0,6	100	300	600
	130	180	24	48	1,5	139,0	171,0	0,6	163	489	978
	130	180	24	33	1,5	139,0	171,0	0,6	100	300	600
	130	180	24	48	1,5	139,0	171,0	0,6	163	489	978
	130	200	33	39	2,0	142,0	189,0	2,0	228	684	1368
	130	200	33	55	2,0	142,0	189,0	2,0	368	1104	2208
	130	200	33	39	2,0	142,0	189,0	2,0	159	477	954
	130	200	33	55	2,0	142,0	189,0	2,0	257	771	1542
	130	200	33	39	2,0	142,0	189,0	2,0	159	477	954
	130	200	33	55	2,0	142,0	189,0	2,0	257	771	1542

12. Size tables



	Axial stiffness (H/um)			Payload (kH)		Limit rotational rate (rpm)		Code	Weight
	L	M	S	Dyn. C	Stat. Co	Grease	Oil	Bearing	kg
	78,0	122,0	167,0	38,5	37,9	9 500	16 000	HS7022C.T.P4S.UL	2,20
	196,0	292,0	378,5	36,4	35,8	8 000	13 000	HS7022E.T.P4S.UL	2,20
	76,0	117,0	157,0	38,5	26,5	11 000	18 000	HC7022C.T.P4S.UL	2,10
	195,0	287,0	370,0	36,4	25,0	9 000	15 000	HC7022E.T.P4S.UL	2,10
	76,0	117,0	157,0	61,7	26,5	14 000	22 000	XC7022C.T.P4S.UL	2,10
	195,0	287,0	370,0	58,2	25,0	12 000	19 000	XC7022E.T.P4S.UL	2,10
	78,0	122,0	165,0	28,2	30,6	9 000	15 000	HS71924C.T.P4S.UL	1,30
	196,0	291,0	379,0	26,8	28,8	8 000	13 000	HS71924E.T.P4S.UL	1,30
	76,0	116,0	155,0	28,2	21,4	11 000	18 000	HC71924C.T.P4S.UL	1,23
	195,0	288,0	371,0	26,6	20,2	9 000	15 000	HC71924E.T.P4S.UL	1,23
	76,0	116,0	155,0	45,2	21,4	14 000	22 000	XC71924C.T.P4S.UL	1,23
	195,0	288,0	371,0	42,6	20,2	12 000	19 000	XC71924E.T.P4S.UL	1,23
	82,5	128,0	175,0	39,6	40,6	8 500	14 000	HS7024C.T.P4S.UL	2,30
	207,0	305,0	398,0	37,3	38,3	7 500	12 000	HS7024E.T.P4S.UL	2,30
	81,0	123,0	165,0	39,6	28,4	10 000	17 000	HC7024C.T.P4S.UL	2,10
	204,0	303,0	390,0	37,3	26,8	8 500	14 000	HC7024E.T.P4S.UL	2,10
	81,0	123,0	165,0	63,4	28,4	13 000	20 000	XC7024C.T.P4S.UL	2,10
	204,0	303,0	390,0	59,7	26,8	11 000	18 000	XC7024E.T.P4S.UL	2,10
	83,0	128,5	175,0	32,5	36,5	8 500	14 000	HS71926C.T.P4S.UL	1,80
	208,0	309,0	400,0	30,7	34,4	7 000	11 000	HS71926E.T.P4S.UL	1,80
	82,0	124,0	164,0	32,5	25,6	9 500	16 000	HC71926C.T.P4S.UL	1,70
	207,0	305,0	392,0	30,7	24,1	8 000	13 000	HC71926E.T.P4S.UL	1,70
	82,0	124,0	164,0	52,1	25,6	12 000	19 000	XC71926C.T.P4S.UL	1,70
	207,0	305,0	392,0	49,0	24,1	11 000	18 000	XC71926E.T.P4S.UL	1,70
	93,0	145,0	198,0	50,9	53,2	7 500	12 000	HS7026C.T.P4S.UL	3,70
	234,0	347,0	450,0	48,0	50,2	6 700	10 000	HS7026E.T.P4S.UL	3,70
	91,0	140,0	187,0	50,9	37,2	9 000	15 000	HC7026C.T.P4S.UL	3,50
	232,0	345,0	444,0	48,0	35,2	7 500	12 000	HC7026E.T.P4S.UL	3,50
	91,0	140,0	187,0	81,4	37,2	12 000	19 000	XC7026C.T.P4S.UL	3,50
	232,0	345,0	444,0	76,8	35,2	10 000	17 000	XC7026E.T.P4S.UL	3,50

13. High-precision cylindrical roller bearings

13.1. General provisions

High precision cylindrical roller bearings are available in single and double row design and are ideal floating bearings. They are characterized by high radial stiffness. In addition to use as a floating bearing, they are also used where required a stable and high-precision bearings with high radial stiffness. The standard version of the bearing has a tapered bore for fine adjustment of the radial clearance ($c1$ 1:12). Thus, the desired radial gap or radial preload is regulated by axial displacement of the conical seat of the shaft.

In addition, there are cylindrical roller bearings with a cylindrical bore. Order code does not include the «K» (for example, NN3012M.HP)

Main dimensions correspond to common sizes roller according to DIN 616 (ISO 15).

13.2. Heat treatment

Precision cylindrical roller bearings are subjected to heat treatment, so that they can be used in working temperatures up to 150 ° C. Bearings with an outer diameter exceeding 120 mm retain dimensional stability up to 200 ° C.

13.3. Design

Single row high-precision cylindrical roller bearings are available in the series N19 and N10. In design versions N inner ring has two edges, and the outer ring runs without edges



Fig. 13.1. Single row cylindrical roller bearing precision

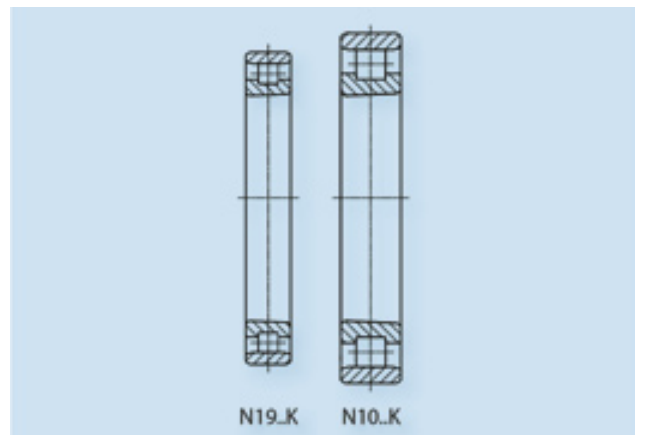


Fig. 13.2. Series of high-precision single row cylindrical roller bearings

13. High-precision cylindrical roller bearings

Precision Double row cylindrical roller bearings are manufactured in batches and NN30 NNU49 in accordance with DIN 5412-4. NN designation means that the bearing is a double row, the inner ring has three ribs and the outer ring has no ribs. In version NNU structure has three outer ring rib and the inner ring runs without ribs.

Upon request, the outer ring can be supplied with an oil groove and at least three oil holes. In this case, in order designation after the code indicates the symbol «S» (for example, NN3012K.SMHP). As a result, lubricant can be supplied directly between the rollers.



Fig. 13.3. Double row high-precision cylindrical roller bearings, series NN30

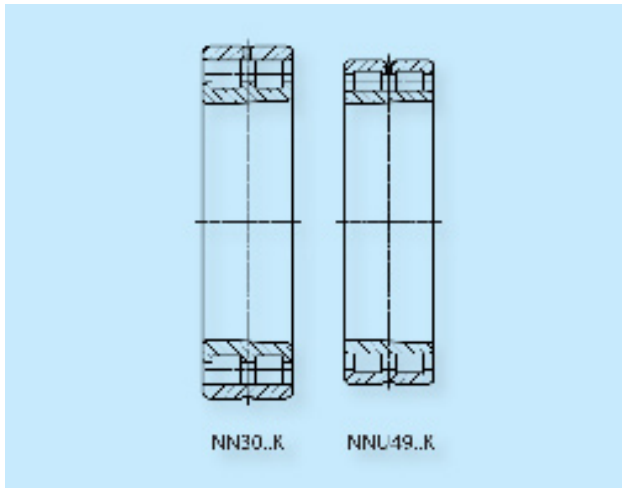


Fig. 13.5. Series of high-precision double row cylindrical roller bearings



Fig. 13.4. Double row high-precision cylindrical roller bearings, series NNU49

13. High-precision cylindrical roller bearings

13.4. Hybrid cylindrical roller bearings

Hybrid cylindrical roller bearings have ceramic HCN10 series cylindrical rollers.

Their use greatly improves the characteristics of friction and wear standpoint. This reduces the load on the lubrication and lower temperatures. For this reason it is also permitted higher speed.



Fig. 13.9. The hybrid cylindrical roller bearing

13. High-precision cylindrical roller bearings

13.5. Materials

In the standard design of the ring and cylindrical rollers precision cylindrical roller made of an vacuumed chromium steel 100Cr6, in the case of large dimensions - of 100CrMnSi6-4.

Precision cylindrical roller bearings are generally solid brass cage guide rollers. On request high-precision single row cylindrical roller bearings can be equipped with cages of PEEK.



Fig. 13.6. Brass separator Single row



Fig. 13.7. PEEK cage, single-row



Fig. 13.8. Brass separator, double row

14. Tolerances and tolerance classes

HP tolerance class

Cylindrical roller bearings have high precision, which is dictated by the conditions of their use, and so have HP tolerance class. He is a Class SP tolerances according to DIN 5412-4.

Подшипники с классом допуска UP могут быть изготовлены для областей применения с еще более высокими требованиями, чем требования DIN 5412-4. Кроме того, по запросу могут выпускаться подшипники в других классах допуска.

The inner ring (Dimensions in mm)												
The nominal bore diameter	over to	18 30	30 50	50 80	80 120	120 150	180 250	250 315	315 400	400 500	500 630	
HP tolerance class(Tolerances in microns)												
Deviation cylindrical hole size	$\Delta d_{mp}, \Delta d_s$	0 -6	0 -8	0 -9	0 -10	0 -13	0 -15	0 -18	0 -23	0 -27	0 -30	
roundness	$V_{dp} / 2$	1.5	2	2.5	2.5	3.5	4	4.5	6	7	8	
Deviation of the size of the conical hole	Δd_s	10 0	12 0	15 0	20 0	25 0	30 0	35 0	40 0	45 0	50 0	
roundness	$V_{dp} / 2$	1.5	2	2.5	2.5	3.5	4	4.5	6	7	8	
Deviation	$\Delta d_{1mp} - \Delta d_{mp}$	4 0	6 0	6 0	8 0	8 0	10 0	12 0	12 0	14 0	16 0	
Deviation in width	ΔB_s	0 -120	0 -120	0 -150	0 -200	0 -250	0 -300	0 -350	0 -400	0 -450	0 -500	
Changing the width	V_{B_s}	5	5	6	7	8	10	13	15	17	20	
radial runout	K_{ja}	3	4	4	5	6	8	8	10	10	12	
Resizing at inclination to the outer cylindrical surface of the hole	S_d	8	8	8	9	10	11	13	15	17	20	
The beating of the assembled inner ring raceway (axial runout)	S_{ja}	8	8	8	9	10	13	15	20	23	25	

outer ring (Dimensions in mm)												
The nominal outer diameter	over to	30 50	50 80	80 120	120 150	150 180	180 250	250 315	315 400	400 500	500 630	630 800
HP tolerance class(Tolerances in microns)												
Deviation	$\Delta D_{mp}, \square D_s$	0 -7	0 -9	0 -10	0 -11	0 -13	0 -15	0 -18	0 -20	0 -23	0 -28	0 -35
resizing	$V_{Dp} / 2$	2	2.5	2.5	3	3.5	4	4.5	5	6	7	9
radial runout	K_{ea}	5	5	6	7	8	10	11	13	15	17	20
Resizing inclination at the outer cylindrical surface with respect to the side surface of the outer ring	S_D	8	8	9	10	10	11	13	13	15	18	20
Heartbeat assembled bearing outer ring raceway (axial runout)	S_{ea}	8	10	11	13	14	15	18	20	23	25	30
Tolerances on width $\Delta C_S V_C$ s and identical tolerances ΔB_s and V_B s for the corresponding inner ring.												

14. Tolerances and tolerance classes

Tolerance class UP

The inner ring (Dimensions in mm)											
The nominal bore diameter	over to	18 30	30 50	50 80	80 120	120 150	180 250	250 315	315 400	400 500	500 630
Tolerance class UP(Tolerances in microns)											
Deviation cylindrical hole size	$\Delta d_{mp}, \Delta d_s$	0 -5	0 -6	0 -7	0 -8	0 -10	0 -12	0 -15	0 -19	0 -23	0 -26
roundness	$V_{dp} / 2$	1.5	1.5	2	2	2.5	3	4	5	6	7
Deviation of the size of the conical hole	Δd_s	6 0	7 0	8 0	10 0	12 0	14 0	15 0	17 0	19 0	20 0
roundness	$V_{dp} / 2$	1.5	1.5	2	2	2.5	3	4	5	6	7
Deviation	$\Delta d_{1mp} - \Delta d_{mp}$	2	3	3	4	4	5	6	6	7	8
Deviation in width	ΔB_s	-25	-30	-40	-50	-60	-75	-100	-100	-100	-125
Changing the width	V_{B_s}	1.5	2	3	3	4	5	5	6	7	8
radial runout	K_{ia}	1.5	2	2	3	3	4	4	5	5	6
Resizing at inclination to the outer cylindrical surface of the hole	S_d	3	3	4	4	5	6	6	7	8	9
The beating of the assembled inner ring raceway (axial runout)	S_{ia}	3	3	3	4	6	7	8	9	10	12

outer ring (Dimensions in mm)												
The nominal outer diameter	over to	30 50	50 80	80 120	120 150	150 180	180 250	250 315	315 400	400 500	500 630	630 800
Tolerance class UP(Tolerances in microns)												
Deviation	$\Delta D_{mp}, \square D_s$	0 -5	0 -6	0 -7	0 -8	0 -9	0 -10	0 -12	0 -14	0 -17	0 -20	0 -25
roundness	$V_{Dp} / 2$	1.5	1.5	2	2	2.5	2.5	3	3.5	4.5	5	6.5
radial runout	K_{ea}	3	3	3	4	4	5	6	7	8	9	11
Resizing inclination at the outer cylindrical surface with respect to the side surface of the outer ring	S_D	2	2	3	3	3	4	4	5	5	6	7
Heartbeat assembled bearing outer ring raceway (axial runout)	S_{ea}	4	4	5	6	7	9	9	12	12	14	17
Tolerances on width ΔC_s VCs and identical tolerances ΔB_s and V_{B_s} for the corresponding inner ring.												

15. The bearing clearance

Radial clearance of single and double row precision cylindrical roller C1

The bearings have a standard radial clearance C1 (less usual clearance CN). The presence of this gap makes these bearings not interchangeable, ie, You can not rearrange the outer rings between the individual bearings, such as in the case of single-row cylindrical roller.

Both clearance C1 and NA (for non-interchangeable bearings) are not specified. Other radial clearances are provided on request.

Dimensions in mm																										
The nominal bore diameter	over to	24	24	30	40	50	65	80	100	120	140	160	180	200	225	250	280	315	355	400	450	500	560	630	710	
with a cylindrical bore(Bearing clearance in microns)																										
Clearance group C1	over to	5	5	5	5	5	10	10	10	10	10	10	15	15	15	20	20	20	25	25	25	25	30	30	30	35
with tapered bore(Bearing clearance in microns)																										
Clearance group C1	over to	10	15	15	17	20	25	35	40	45	50	55	60	60	65	75	80	90	100	110	120	130	140	160	170	170

16. Calculation of bearing design

16.1. General provisions

Calculation of the design for the basic rated load and the bearing life is based on DIN ISO 76 standard (static rated load), and DIN ISO 281 (dynamic rated load and rated lifespan). These standards describe the complex calculations of structures. As a result, below we will focus only on the core design calculations. These construction payments are used to provide a rough estimation of the bearing.

More in-depth evaluation of bearings are possible by calculating the Hertz contact pressure between the rolling elements and the tracks taking into account the actual conditions of lubrication by means of special calculation programs. In this regard, please contact our engineering department.

16.2. Rated Lifetime

The service life of the bearing indicated by the number of revolutions or hours to as long as the bearing does not show signs of damage. The most common causes are wear, overheating and jamming due to overload (mechanical and thermal), as well as material fatigue. The most common reason for failure in high-speed conditions of use - overheating, followed by bearing seizure. In accordance with DIN ISO 281 rated life cylindrical roller bearings is calculated as follows:

$L_{10} = \left(\frac{C_r}{P_r}\right)^{10/3}$	in millions of revolutions
$L_{10h} = \frac{L_{10} \cdot 10^6}{60 \cdot n}$	hours

L_{10}	Nominal rating life in millions of revolutions with 10% failure probability
L_{10h}	Nominal rating life in hours with 10% failure probability
C_r	Dynamic radial load rating in N
P_r	Dynamic equivalent radial loading in N
F_r	Radial load in N
n	Revolutions in min^{-1}

16.3. Equivalent dynamic bearing load

If the bearings are simultaneously subjected to radial and axial load when calculating the service life of such loads are combined into an equivalent load. To calculate the high-precision cylindrical roller bearings is only 1 radial load.

Equivalent dynamic bearing load of cylindrical roller bearings with a contact angle = 0 °:

$P_r = F_r$	in N
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17. The tolerances for the installation of cylindrical roller bearings

17.1. Tolerances for machining parts surrounding the bearings

High performance cylindrical roller is only guaranteed if the accuracy of the respective adjacent parts is provided in accordance with the precision bearings. This condition is required, since the cylindrical roller bearing ring adapted to the shape of the shaft or in the housing opening. This can lead to the formation of defects in shape and misalignment, which in turn leads to higher operating temperatures. The higher the required speed and accuracy levels for the bearing, the more these deficiencies become apparent. Observe average roughness Ra bearing sockets to provide a proper fit, which changes only very slightly during the installation (surface smoothing).

17.2. Recommendation for machining cylindrical shafts

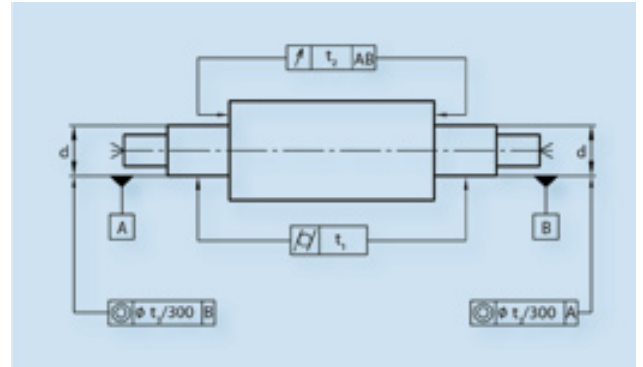


Fig. 17.1. Machining of cylindrical shafts

Tolerances for the installation of cylindrical shafts

		Nominal size of the shaft, d (Mm)										
		over to	18 30	30 50	50 80	80 120	120 180	180 250	250 315	315 400	400 500	500 630
		Dimensions and tolerances (In microns)										
Size d	HP (SP)		3 -3	3.5 -3.5	4 -4	5 -5	6 -6	7 -7	8 -8	9 -9	10 -10	11 -11
	UP		2 -2	2 -2	2.5 -2.5	3 -3	4 -4	5 -5	6 -6	6.5 -6.5	7.5 -7.5	8 -8
Cylindrical shape, t1	HP (SP)		1	1	1.2	1.5	2	3	4	5	6	7
	UP		0.6	0.6	0.8	1	1.2	2	2.5	3	4	5
Runout, t2	HP (SP)		1.5	1.5	2	2.5	3.5	4.5	6	7	8	9
	UP		1	1	1.2	1.5	2	3	4	5	6	7
Concentricity t3	HP (SP)		4	4	5	6	8	10	12	13	15	16
	UP		2.5	2.5	3	4	5	7	8	9	10	11
Average roughness, Ra	HP (SP), UP		0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.4

17. The tolerances for the installation of cylindrical roller bearings

17.3. Recommendations for machining shafts conical

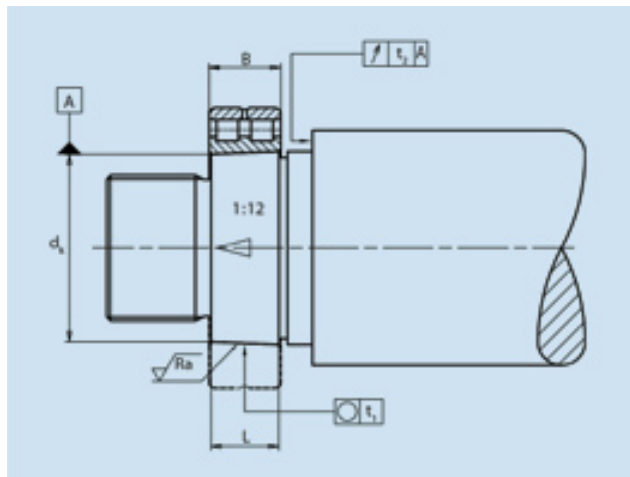


Fig. 17.2. Machining of tapered rollers

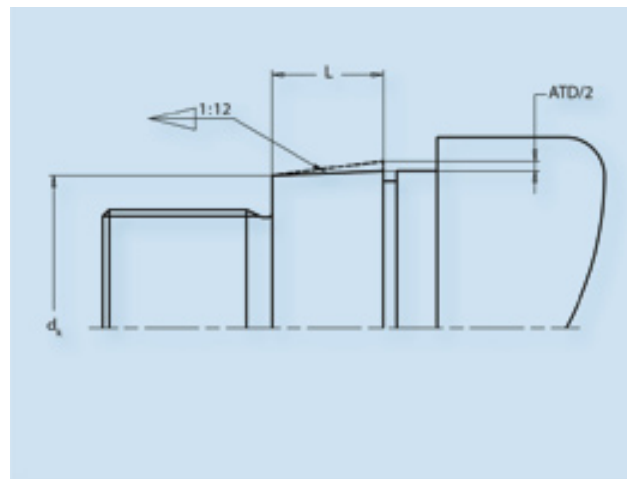


Fig. 17.3. Machining of tapered rollers (detail)

The tolerances for the installation of tapered rollers (1)

		Nominal shaft size d (mm)											
Bearing tolerance class		over to	18 30	30 40	40 50	50 65	65 80	80 100	100 120	120 140	140 160	160 180	180 200
		Dimensions and tolerances (In microns)											
The size to dk	HP(SP), UP		73 64	94 80	108 97	135 122	159 146	193 178	225 210	266 248	298 280	328 310	370 350
roundness t1	HP(SP)		1	1	1	1,2	1,2	1,5	1,5	2	2	2	3
	UP		0,6	0,6	0,6	0,8	0,8	1	1	1,2	1,2	1,2	2
Runout, t2	HP(SP)		1,5	1,5	1,5	2	2	2,5	2,5	3,5	3,5	3,5	4,5
	UP		1	1	1	1,2	1,2	1,5	1,5	2	2	2	3
Average roughness, Ra	HP(SP), UP		0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2

17. The tolerances for the installation of cylindrical roller bearings

The tolerances for the installation of tapered rollers

		Nominal shaft size d (mm)											
	Bearing tolerance class	over to	200 225	225 250	250 280	280 315	315 355	355 400	400 450	450 500	500 560	560 630	630 710
Dimensions and tolerances (In microns)													
The size to dk	HP(SP), UP		405 385	445 425	498 475	548 525	615 590	685 660	767 740	847 820	928 900	1008 980	1092 1060
roundness t1	HP(SP)		3	3	4	4	5	5	6	6	7	7	8
	UP		2	2	2,5	2,5	3	3	4	4	5	5	5
Runout, t2	HP(SP)		4,5	4,5	6	6	7	7	8	8	9	9	10
	UP		3	3	4	4	5	5	6	6	7	7	8
Average roughness, Ra	HP(SP), UP		0,2	0,2	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4

Tolerance for the taper angle

		Taper length L(Mm)					
	Bearing tolerance class	> 16...25	> 25...40	> 40...63	> 63...100	> 100...160	> 160...250
Tolerance to the taper angle, ATD	HP (SP)	+2...+3,2 0	+2,5...+4 0	+3,2...+5 0	+4...+6,3 0	+5...+8 0	+6,3...+10 0
	UP	+1,3...+2 0	+1,6...+2,5 0	+2...+3,2 0	+2,5...+4 0	+3,2...+5 0	+4...+6,3 0

17. The tolerances for the installation of cylindrical roller bearings

17.4. Recommendation for machining holes in housing

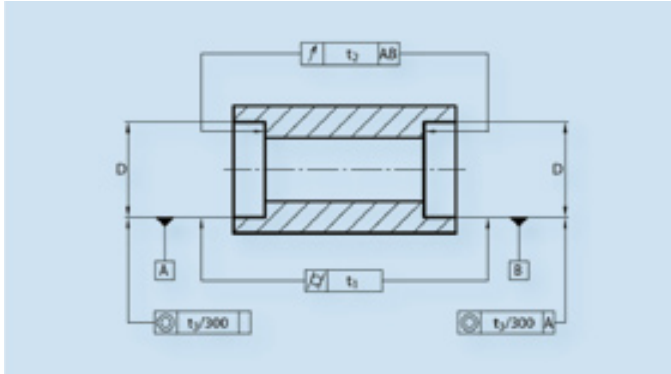


Fig.17.4. Machining holes in the housing

		Nominal shaft size, D (Mm)											
		Tolerance class of bearing	over to	30 50	50 80	80 120	120 180	180 250	250 315	315 400	400 500	500 630	630 800
		Dimensions and tolerances(In microns)											
Size d	HP (SP)			2 -9	3 -10	2 -13	3 -15	2 -18	3 -20	3 -22	2 -25	0 -29	0 -32
	UP			1 -6	1 -7	1 -9	1 -11	0 -14	0 -16	0 -17	0 -20	0 -22	0 -24
Cylindrical shape, t1	HP (SP)			1,5	2	2,5	3,5	4,5	6	7	8	9	10
	UP			1	1,2	1,5	2	3	4	5	6	7	8
Runout, t2	HP (SP)			2,5	3	4	5	7	8	9	10	11	12
	UP			1,5	2	2,5	3,5	4,5	6	7	8	9	10
Concentricity t3	HP (SP)			4	5	6	8	10	12	13	15	16	18
	UP			2,5	3	4	5	7	8	9	10	11	12
Average roughness, Ra	HP (SP), UP			0,2	0,4	0,4	0,4	0,4	0,8	0,8	0,8	1,6	1,6

18. Installation

18.1. Preparing the installation

High precision bearings meet the most stringent requirements for cleanliness and accuracy. Bearings should be installed with the utmost care. Make sure they are installed in a room that is as clean as possible and free of dust, temperature controlled. Before installing the bearings need to verify the accuracy of connecting parts sizes. Provide and use only those tools that are suitable for installation. Open the bearing package only immediately prior to installation. Remove excess anticorrosive oil by using a clean, lint-free cloth. In case of installing multiple bearing inner rings are not interchangeable.

18.2. Bearing Lubrication

In the case of lubricants and anti-corrosion oil incompatibility provided with grease bearings should be rinsed with low viscosity oil or kerosene and dried. Followed evenly recommended amount of lubricant on the outer and / or inner contour of the separator between the rollers; Use your fingers to apply grease to the rollers, manually turning them. (For information about the recommended amount of grease can be found in Section 23.2.3. The amount of lubricant).

18.3. Bearing installation

Cylindrical roller bearings with a tapered bore have a larger bearing clearance than bearings with a cylindrical bore. Tapered inner rings are attached to the shaft of the c1 by means of clamping nuts. Depending on how they are displaced in the axial direction, the inner ring is expanded, and the bearing can be mounted with clearance, without clearance or even preload.

Controlled by a device for measuring the circumference of the envelope

For this first set outer ring (series NN or N) into the housing and the raceway diameter is calculated. Then the measured diameter of the circumference of the outer envelope of cylindrical rollers in a 10Si1d pre inner ring raceway with the rollers. The difference between the diameter of the raceway diameter of the envelope circle of the bearing determines the current clearance and / or preload. Desired parameters can be adjusted by further axial displacement.

It is necessary to calculate the appropriate size L for fixing the bearing in position by the adapter ring. For this purpose, the distance between the inner bearing ring and a shoulder of the shaft is measured at 4 points spaced apart by 90°. After removal of the inner ring on the cylindrical portion of the shaft between a shaft shoulder and an inner ring wear smoothed adapter ring. Finally, the inner ring is fixed by a clamping nut.

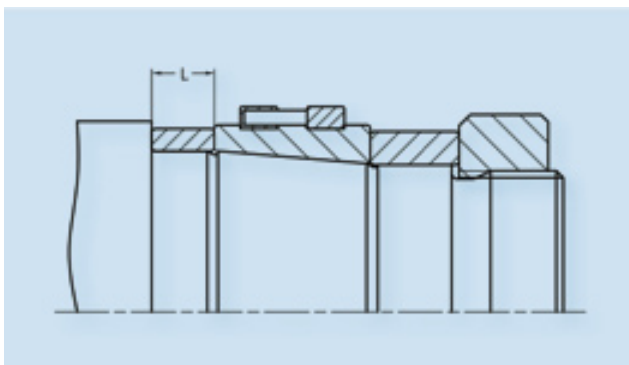


Fig. 18.1. Controlled by a device for measuring the circumference of the envelope

Adjustment without a device for measuring the circumference of the envelope

Set the outer ring in the housing. Arbitrarily wear inner ring with rollers rolling on the track shaft and precisely center the c1 in its housing. Measure the radial clearance by sliding the inner ring in the radial direction to the outer ring.

Secure the desired radial clearance or preload by axial displacement of the inner ring. In the case of a c1 1:12 shift distance of the continuous shaft should be approximately 20 times more of the resulting radial expansion. Secure bearing adapter ring in accordance with adjustment obtained using a device for measuring the circumference of the envelope.

Fixed radial clearance or preload affects the attainable rotational speed as follows:

Single row cylindrical roller bearings	
Radial clearance / preload	The achievable speed
Preload -5 ... 0 microns	$<0,75 * n$ (grease)
0 microns, without a gap	from 0.75 to $1 * n$ (grease)
Radial clearance from 0 to 5 .mu.m	1 to $1,1 * n$ (grease)
Radial clearance from 0 to 5 .mu.m	$1 * n$ (oil)

Double row cylindrical roller bearings	
Radial clearance / preload	The achievable speed
Preload -5 ... 0 microns	$<0,5 * n$ (grease)
radial clearance from 0 to $2 * 10^{-5} * dm$ (mm)	0.5 to $0,75 * n$ (grease)
Radial clearance between $2 * 10^{-5} * dm$ to $4 * 10^{-5} * dm$ (mm)	from 0.75 to $1 * n$ (grease)
radial clearance from 0 to $1 * 10^{-5} * dm$ (mm)	$1 * n$ (oil)
The average diameter of the bearing $dm = (d + D) / 2$	

19. Marking of bearings

19.1. Content and layout of marking

Rolling bearings are usually marked as follows:

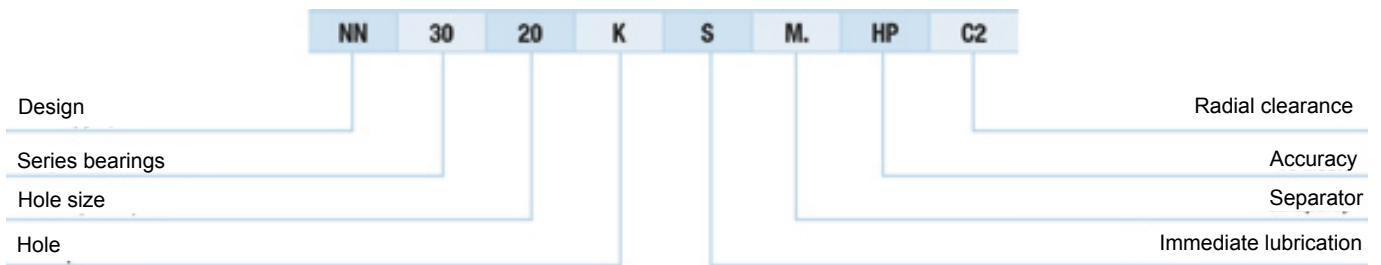
- Brand Name VBF
- Product designation, for example, "N1920K.

M1.HP"

- Country of: MADE IN RUSSIA
- Year of bearing release

Bearing marking is usually located on a flat side of the outer and inner rings.

19.2. Labeling scheme precision cylindrical roller bearings

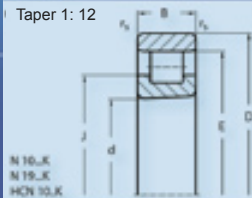


Design	
N	single-row, two ribs on inner ring, outer ring without rib, with steel rollers
HCN	single-row, two ribs on inner ring, outer ring without rib, with ceramic rollers
NNU	double-row, three ribs on outer ring, inner ring without rib, with steel rollers
NN	double-row, three ribs on inner ring, outer ring without rib, with steel rollers
Bearing series	
19	light series
10	medium series
49	light series
30	medium series
Bore size	
06	6 * 5 = 30 mm
07	7 * 5 = 35 mm
08	8 * 5 = 40 mm
Bore	
K	taper 1: 12

Direct lubrication	
S	lubrication groove and lubrication holes on outer ring
Cage	
M1	Brass cage, roller-guided, single-row
ENPA	Window cage made of PEEK, guide on outer ring, single-row
M	Brass cage, roller-guided, double-row
Precision	
HP	Tolerance class SP, DIN 5412-4 (Standard)
UP	Tolerance class UP, DIN 5412-4
Radial clearance	
-	Radial clearance C1NA, DIN 5412-4 (Standard)
C2	Radial clearance greater than C1NA, DIN 620-4
R10.30	Special radial clearance, shown in im

20. The introduction of brands from other manufacturers in the product designation VBF

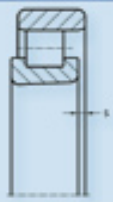
Mark	VBF	FAG	SKF	SNFA	NSK
Series					
N19	N19 ...	N19 ...			
N10	N10 ...	N10 ...	N10 ..	N10 ..	N10..HS
NNU49	NNU49 ..	NNU49 ..	NNU49 ..	NNU49 ..	NNU49 ..
NN30	NN30 ..	NN30 ..	NN30 ..	NN30 ..	NN30 ..
Hole					
C1 1: 12	K	-K	K	KR	K
The oil groove and the oil holes in the outer ring					
series N	.S	-S	W33	E44	
NN (U) Series	.S	-AS	W33	E44	
Separator					
Brass (N)	.M1	-M1	without	MR	without
PEEK (N)	.ENPA	-PVPA	PHA	TP	T6
Brass (NN)	M	-M	without	MB	without
Accuracy					
tolerance class	.HP .UP	-SP -UP	SP UP	P4 P2	P4 UP
radial clearance					
C1 (cylinder. Hole)	without	without	without	CC1	C1NA
C1 (tapered hole)	without	without	without	CC0	C1NA
C2	.C2	-C2	SPC2	CC2	C2NA
Special radial clearance (microns)	Rx.x	Rx.x		CCG	



21. Size tables

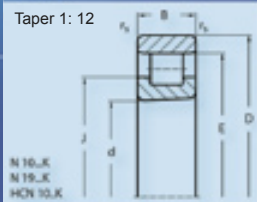
21.1. High precision cylindrical roller bearings, single row

Shaft	dimensions (Mm)						
	d	D	B	$r_{s,min}$	E	J	s
30	30	55	13	0,6	48,5	38,7	1,9
	30	55	13	0,6	48,5	38,7	1,9
35	35	62	14	0,6	55,0	44,4	2,0
	35	62	14	0,6	55,0	44,4	2,0
40	40	68	15	0,6	61,0	49,7	2,1
	40	68	15	0,6	61,0	49,7	2,1
45	45	75	16	0,6	67,5	55,4	2,2
	45	75	16	0,6	67,5	55,4	2,2
50	50	72	12	0,6	66,5	57,9	1,8
	50	80	16	0,6	72,5	60,5	2,2
	50	80	16	0,6	72,5	60,5	2,2
55	55	80	13	1,0	73,5	64,1	1,9
	55	90	18	1,0	80,5	67,7	2,5
	55	90	18	1,0	80,5	67,7	2,5
60	60	85	13	1,0	78,5	69,1	1,9
	60	95	18	1,0	85,5	72,6	2,5
	60	95	18	1,0	85,5	72,6	2,5
65	65	90	13	1,0	83,5	74,1	1,9
	65	100	18	1,0	90,5	77,6	2,5
	65	100	18	1,0	90,5	77,6	2,5
70	70	100	16	1,0	92,5	81,0	2,3
	70	110	20	1,0	100,0	83,9	2,5
	70	110	20	1,0	100,0	83,9	2,5
75	75	105	16	1,0	97,0	86,0	2,3
	75	115	20	1,0	105,0	88,9	2,5
	75	115	20	1,0	105,0	88,9	2,5
80	80	110	16	1,0	102,5	91,0	2,3
	80	125	22	1,0	113,5	95,8	3,0
	80	125	22	1,0	113,5	95,8	3,0
85	85	120	18	1,0	110,5	97,9	2,5
	85	130	22	1,0	118,5	100,7	3,0
	85	130	22	1,0	118,5	100,7	3,0



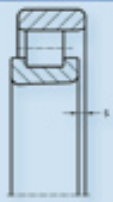
21. Size tables

	Rated load (KN)		Speed limit (min ^{-one})		Code	Weight
	C dyn.	Co stat.	grease	oil	bearing	kg
	20,7	21,0	19000	22000	N 1006K.M1.HP	0,130
	16,5	16,8	24000	28000	HCN 1006K.M1.HP	0,120
	25,7	27,5	16000	18000	N 1007K.M1.HP	0,170
	20,6	22,0	22000	25000	HCN 1007K.M1.HP	0,150
	29,9	32,7	15000	17000	N 1008K.M1.HP	0,210
	23,9	26,2	20000	24000	HCN 1008K.M1.HP	0,190
	35,5	40,0	13000	15000	N 1009K.M1.HP	0,260
	28,4	32,0	17000	19000	HCN 1009K.M1.HP	0,230
	22,4	27,5	13000	15000	N 1910K.M1.HP	0,150
	36,5	42,4	12000	14000	N 1010K.M1.HP	0,280
	29,2	33,9	16000	18000	HCN 1010K.M1.HP	0,250
	25,0	31,5	12000	14000	N 1911K.M1.HP	0,210
	41,3	49,7	11000	13000	N 1011K.M1.HP	0,440
	33,0	39,8	14000	16000	HCN 1011K.M1.HP	0,400
	26,0	34,0	11000	13000	N 1912K.M1.HP	0,220
	44,9	56,8	10000	12000	N 1012K.M1.HP	0,470
	35,9	45,5	13000	15000	HCN 1012K.M1.HP	0,410
	29,0	40,0	10000	12000	N 1913K.M1.HP	0,240
	44,7	57,0	9500	11000	N 1013K.M1.HP	0,500
	36,0	46,0	12000	14000	HCN 1013K.M1.HP	0,450
	36,5	49,0	9500	11000	N 1914K.M1.HP	0,380
	64,6	81,0	9000	10000	N 1014K.M1.HP	0,670
	51,6	64,8	12000	14000	HCN 1014K.M1.HP	0,590
	38,0	53,0	9000	10000	N 1915K.M1.HP	0,410
	66,6	85,0	8500	9500	N 1015K.M1.HP	0,710
	53,3	68,0	11000	13000	HCN 1015K.M1.HP	0,630
	39,0	56,0	8500	9500	N 1916K.M1.HP	0,430
	77,1	98,5	7500	8500	N 1016K.M1.HP	1,00
	61,7	78,8	10000	12000	HCN 1016K.M1.HP	0,880
	52,1	74,8	7500	8500	N 1917K.M1.HP	0,600
	78,4	103,2	7500	8500	N 1017K.M1.HP	1,04
	62,7	82,6	10000	12000	HCN 1017K.M1.HP	0,920



21. Size tables

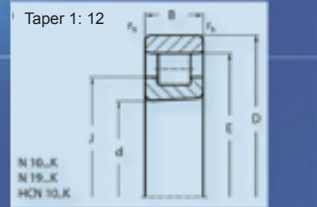
Shaft	dimensions (Mm)						
	d	D	B	r _s min	E	J	s
90	90	125	18	1,0	115,5	102,9	2,5
	90	140	24	1,1	127,0	107,6	3,2
	90	140	24	1,1	127,0	107,6	3,2
95	95	130	18	1,0	120,5	107,9	2,5
	95	145	24	1,1	132,0	112,6	3,2
	95	145	24	1,1	132,0	112,6	3,2
100	100	140	20	1,0	130,0	114,2	2,5
	100	150	24	1,1	137,0	117,6	3,2
	100	150	24	1,1	137,0	117,6	3,2
105	105	145	20	1,0	135,0	119,2	2,5
	105	160	26	1,1	145,5	124,5	3,4
	105	160	26	1,1	145,5	124,5	3,4
110	110	150	20	1,0	140,0	123,9	2,5
	110	170	28	1,1	155,0	130,8	3,4
	110	170	28	1,1	155,0	130,8	3,4
120	120	165	22	1,0	153,5	135,6	3,0
	120	180	28	1,1	165,0	140,8	3,4
	120	180	28	1,1	165,0	140,8	3,4
130	130	180	24	1,1	167,0	147,7	3,2
	130	200	33	1,1	182,0	154,6	4,2
140	140	190	24	1,1	177,0	158,0	3,2
	140	210	33	1,1	192,0	164,6	4,2
150	150	210	28	1,1	194,0	171,7	3,6
	150	225	35	1,5	205,5	176,5	4,4
160	160	220	28	1,1	204,0	181,7	3,6
	160	240	38	1,5	220,0	187,8	4,6
170	170	230	28	1,1	214,0	191,6	3,6
	170	260	42	2,1	237,0	200,9	5,0
180	180	250	33	1,1	232,0	204,8	4,2
	180	280	46	2,1	255,0	214,1	5,6
190	190	260	33	1,1	242,0	214,8	4,2
	190	290	46	2,1	265,0	224,1	5,6
200	200	280	38	1,5	259,0	228,5	4,8
	200	310	51	2,1	281,0	239,1	6,4



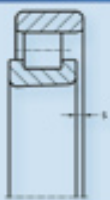
21. Size tables

	Rated load (KN)		Speed limit (min ^{-one})		Code	Weight
	C dyn.	Co stat.	grease	oil	bearing	kg
	52,0	77,5	7 500	8 500	N 1918K.M1.HP	0,630
	93,0	124,0	6 700	7 500	N 1018K.M1.HP	1,39
	74,4	99,3	9 000	10 000	HCN 1018K.M1.HP	1,23
	53,1	80,1	7 000	8 000	N 1919K.M1.HP	0,660
	95,8	129,7	6 300	7 000	N 1019K.M1.HP	1,34
	76,6	103,8	8 000	9 000	HCN 1019K.M1.HP	1,20
	76,9	112,0	6 300	7 000	N 1920K.M1.HP	0,894
	97,8	134,0	6 000	6 700	N 1020K.M1.HP	1,39
	78,2	107,2	8 000	9 000	HCN 1020K.M1.HP	1,23
	78,7	117,0	6 000	6 700	N 1921K.M1.HP	0,930
	113,6	156,9	5 600	6 300	N 1021K.M1.HP	1,82
	90,8	125,5	7 500	8 500	HCN 1021K.M1.HP	1,61
	80,6	121,0	6 000	6 700	N 1922K.M1.HP	0,960
	140,6	189,5	5 300	6 000	N 1022K.M1.HP	2,23
	112,4	151,6	7 000	8 000	HCN 1022K.M1.HP	1,94
	96,1	146,0	5 300	6 000	N 1924K.M1.HP	1,33
	148,0	208,5	5 000	5 600	N 1024K.M1.HP	2,45
	118,4	166,8	6 700	7 500	HCN 1024K.M1.HP	2,14
	113,0	174,0	4 800	5 300	N 1926K.M1.HP	1,77
	181,0	257,0	4 300	4 800	N 1026K.M1.HP	3,62
	117,6	190,0	4 300	4 800	N 1928K.M1.HP	1,89
	186,6	268,6	4 000	4 500	N 1028K.M1.HP	3,83
	153,6	243,0	4 000	4 500	N 1930K.M1.HP	2,93
	213,4	313,2	3 800	4 300	N 1030K.M1.HP	4,71
	156,4	259,0	3 800	4 300	N 1932K.M1.HP	3,13
	244,8	356,4	3 400	3 800	N 1032K.M1.HP	5,79
	159,6	267,0	3 400	3 800	N 1934K.M1.HP	3,23
	297,8	441,0	3 200	3 600	N 1034K.M1.HP	7,70
	215,2	348,0	3 200	3 600	N 1936K.M1.HP	4,82
	370,4	541,2	3 000	3 400	N 1036K.M1.HP	9,96
	220,1	360,0	3 000	3 400	N 1938K.M1.HP	5,00
	376,5	566,6	2 800	3 200	N 1038K.M1.HP	10,4
	268,9	443,0	2 800	3 200	N 1940K.M1.HP	6,00
	405,9	616,4	2 600	3 000	N 1040K.M1.HP	13,7

21. Size tables



Shaft	dimensions (Mm)						
	d	D	B	r _s min	E	J	s
220	220	300	38	1,5	279,0	248,5	4,8
	220	340	56	3,0	310,0	261,7	6,6
240	240	320	38	1,5	299,0	268,5	4,8
	240	360	56	3,0	330,0	281,7	6,6
260	260	360	46	1,5	334,0	295,4	5,4
	260	400	65	4,0	364,0	309,3	8,1
280	280	380	46	1,5	354,0	313,1	5,4
	280	420	65	4,0	384,0	329,3	8,1
300	300	420	56	3,0	390,0	341,7	6,6
	300	460	74	4,0	420,0	355,7	8,7
320	320	440	56	3,0	410,0	361,7	6,6
	320	480	74	4,0	440,0	375,7	8,7
340	340	460	56	3,0	430,0	381,7	6,6
	340	520	82	5,0	475,0	402,7	9,3
360	360	480	56	3,0	450,0	401,7	6,6
	360	540	82	5,0	495,0	421,6	9,3
380	380	520	65	4,0	484,0	429,6	8,1
	380	560	82	5,0	515,0	441,6	9,3
400	400	540	65	4,0	504,0	449,6	8,1
	400	600	90	5,0	550,0	470,0	10,4
420	420	560	65	4,0	524,0	469,6	8,1
	420	620	90	5,0	570,0	489,7	10,4
440	440	600	74	4,0	558,0	497,2	9,1
	440	650	94	6,0	597,0	513,5	10,8
460	460	620	74	4,0	578,0	517,2	9,1
	460	680	100	6,0	624,0	536,5	11,6
480	480	650	78	5,0	605,0	541,0	9,5
	480	700	100	6,0	644,0	556,4	11,6
500	500	670	78	5,0	625,0	561,0	9,5
	500	720	100	6,0	664,0	576,5	11,6

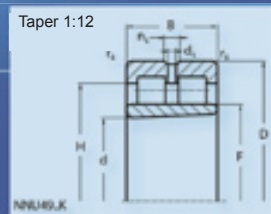
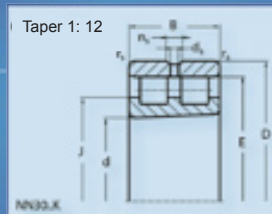


N 10...K
N 19...K
HCN 90...X

21. Size tables

	Rated load (KN)		Speed limit (min ^{-one})		Code	Weight
	C dyn.	Co stat.	grease	oil	bearing	kg
	274,5	474,0	2 600	3 000	N 1944K.M1.HP	7,63
	516,2	775,0	2 400	2 800	N 1044K.M1.HP	17,9
	292,5	519,0	2 400	2 800	N 1948K.M1.HP	8,22
	540,4	846,3	2 200	2 600	N 1048K.M1.HP	19,2
	439,6	750,0	2 000	2 400	N 1952K.M1.HP	16,8
	669,0	1057,0	1 900	2 200	N 1052K.M1.HP	28,6
	459,4	800,0	1 900	2 200	N 1956K.M1.HP	14,6
	708,8	1149,0	1 800	2 000	N 1056K.M1.HP	30,4
	609,0	1061,0	1 700	1 900	N 1960K.M1.HP	23,1
	906,0	1437,0	1 600	1 800	N 1060K.M1.HP	43,0
	637,0	1133,0	1 600	1 800	N 1964K.M1.HP	24,9
	920,0	1503,0	1 500	1 700	N 1064K.M1.HP	45,2
	665,0	1204,0	1 500	1 700	N 1968K.M1.HP	26,3
	1100,0	1795,0	1 400	1 600	N 1068K.M1.HP	60,7
	662,0	1243,0	1 400	1 600	N 1972K.M1.HP	27,5
	1132,0	1876,0	1 300	1 500	N 1072K.M1.HP	64,4
	815,0	1500,0	1 300	1 500	N 1976K.M1.HP	40,0
	1165,0	1958,0	1 300	1 500	N 1076K.M1.HP	66,8
	815,0	1580,0	1 300	1 500	N 1980K.M1.HP	41,7
	1435,0	2448,0	1 200	1 400	N 1080K.M1.HP	86,2
	850,0	1630,0	1 200	1 400	N 1984K.M1.HP	43,5
	1400,0	2400,0	1 100	1 300	N 1084K.M1.HP	90,7
	1020,0	1960,0	1 100	1 300	N 1988K.M1.HP	60,2
	1560,0	2750,0	1 100	1 300	N 1088K.M1.HP	106
	1060,0	2080,0	1 100	1 300	N 1992K.M1.HP	62,6
	1660,0	3000,0	1 000	1 200	N 1092K.M1.HP	120
	1140,0	2240,0	1 000	1 200	N 1996K.M1.HP	73,1
	1700,0	3100,0	0950	1 100	N 1096K.M1.HP	125
	1180,0	2360,0	1 000	1 200	N 19/500K.M1.HP	75,7
	1760,0	3200,0	950	1 100	N 10/500K.M1.HP	130

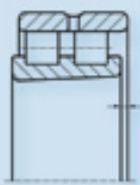
21. Size tables



21.2. High precision cylindrical roller bearings, double row

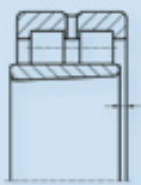
Shaft	dimensions (Mm)										
	d	D	B	r _s min	E	J	F	H	n _s	d _s	s
30	30	55	19	1,0	48,5	39,7			4,8	3,2	1,4
35	35	62	20	1,0	55,0	45,4			4,8	3,2	1,4
40	40	68	21	1,0	61,0	50,6			4,8	3,2	1,4
45	45	75	23	1,0	67,5	56,3			4,8	3,2	1,7
50	50	80	23	1,0	72,5	61,3			4,8	3,2	1,7
55	55	90	26	1,1	81,0	68,2			4,8	3,2	1,9
60	60	95	26	1,1	86,1	73,3			4,8	3,2	1,9
65	65	100	26	1,1	91,0	78,2			4,8	3,2	1,9
70	70	110	30	1,1	100,0	85,6			6,5	3,2	2,3
75	75	115	30	1,1	105,0	90,6			6,5	3,2	2,3
80	80	125	34	1,1	113,0	97,0			6,5	3,2	2,5
85	85	130	34	1,1	118,0	102,0			6,5	3,2	2,5
90	90	140	37	1,5	127,0	109,4			6,5	3,2	2,6
95	95	145	37	1,5	132,0	114,4			6,5	3,2	2,6
100	100	140	40	1,1			113,0	125,8	6,5	3,2	2,0
	100	150	37	1,5	137,0	119,4			6,5	3,2	2,6
105	105	145	40	1,1			118,0	130,8	6,5	3,2	2,0
	105	160	41	2,0	146,0	125,2			6,5	3,2	2,6
110	110	150	40	1,1			123,0	135,8	6,5	3,2	2,0
	110	170	45	2,0	155,0	132,6			6,5	3,2	2,9
120	120	165	45	1,1			134,5	150,5	6,5	3,2	2,3
	120	180	46	2,0	165,0	142,6			6,5	3,2	3,1
130	130	180	50	1,5			146,0	162,0	6,5	3,2	2,7
	130	200	52	2,0	182,0	156,4			9,5	4,8	3,1
140	140	190	50	1,5			156,0	172,0	6,5	3,2	2,7
	140	210	53	2,0	192,0	166,4			9,5	4,8	3,4
150	150	210	60	2,0			168,5	191,0	6,5	3,2	2,7
	150	225	56	2,1	206,0	178,8			9,5	4,8	3,8
160	160	220	60	2,0			178,5	201,0	6,5	3,2	2,7
	160	240	60	2,1	219,0	190,2			9,5	4,8	4,3
170	170	230	60	2,0			188,5	211,0	6,5	3,2	2,7
	170	260	67	2,1	236,0	204,0			9,5	4,8	4,6
180	180	250	69	2,0			202,0	222,0	9,5	4,8	3,2
	180	280	74	2,1	255,0	218,2			12,2	6,3	4,8

размер: 1312



NN300.X

размер: 1312

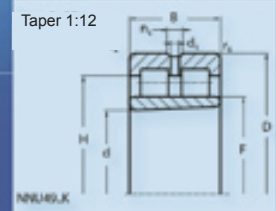
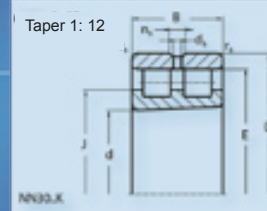


NNU49.X

21. Size tables

	Rated load (kN) Номинальная нагрузка (кН)		Speed limit (min ⁻¹) Предельная скорость (мин ⁻¹)		Code Код	Weight масса kg
	С dyn.	Со стат.	консистентная смазка grease	масло oil		
	29	34	16 000	19 000	NN3006K.M.HP	0,191
	36	44	14 000	17 000	NN3007K.M.HP	0,249
	42	53	12 000	15 000	NN3008K.M.HP	0,303
	54	72	11 000	14 000	NN3009K.M.HP	0,393
	57	79	10 000	13 000	NN3010K.M.HP	0,426
	71	100	9 000	11 000	NN3011K.M.HP	0,630
	74	109	8 500	10 000	NN3012K.M.HP	0,674
	77	114	8 000	9 500	NN3013K.M.HP	0,715
	98	148	7 000	8 500	NN3014K.M.HP	1,04
	99	155	6 700	8 000	NN3015K.M.HP	1,07
	120	186	6 300	7 500	NN3016K.M.HP	1,50
	125	201	6 000	7 000	NN3017K.M.HP	1,56
	140	225	5 600	6 700	NN3018K.M.HP	2,05
	144	234	5 300	6 300	NN3019K.M.HP	2,13
	129	253	5 300	6 300	NNU4920K.M.HP	1,85
	148	243	5 300	6 300	NN3020K.M.HP	2,28
	128	261	5 300	6 300	NNU4921K.M.HP	1,92
	195	314	4 800	5 600	NN3021K.M.HP	2,84
	131	269	5 000	6 000	NNU4922K.M.HP	2,07
	222	361	4 500	5 300	NN3022K.M.HP	3,61
	175	341	4 500	5 300	NNU4924K.M.HP	2,75
	242	416	4 300	5 000	NN3024K.M.HP	3,92
	186	385	4 000	4 800	NNU4926K.M.HP	3,80
	296	498	3 800	4 500	NN3026K.M.HP	5,80
	190	398	3 800	4 500	NNU4928K.M.HP	4,05
	299	520	3 600	4 300	NN3028K.M.HP	6,15
	331	652	3 600	4 300	NNU4930K.M.HP	6,00
	336	592	3 400	4 000	NN3030K.M.HP	7,53
	331	676	3 400	4 000	NNU4932K.M.HP	6,40
	376	669	3 200	3 800	NN3032K.M.HP	9,10
	339	700	3 200	3 800	NNU4934K.M.HP	6,68
	449	805	3 000	3 600	NN3034K.M.HP	12,5
	404	856	3 000	3 600	NNU4936K.M.HP	9,89
	566	996	2 800	3 400	NN3036K.M.HP	16,4

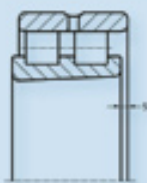
21. Size tables



Shaft	dimensions (Mm)										
	d	D	B	r _s min	E	J	F	H	n _s	d _s	s
190	190	260	69	2,0			212,0	236,0	9,5	4,8	3,2
	190	290	75	2,1	265,0	228,2			12,2	6,3	4,8
200	200	280	80	2,1			225,0	252,2	12,2	6,3	4,3
	200	310	82	2,1	282,0	242,0			12,2	6,3	5,7
220	220	300	80	2,1			245,0	272,2	12,2	6,3	4,3
	220	340	90	3,0	310,0	265,2			15,0	8,0	5,7
240	240	320	80	2,1			265,0	292,2	12,2	6,3	4,3
	240	360	92	3,0	330,0	285,2			15,0	8,0	6,1
260	260	360	100	2,1			292,0	325,6	15,0	8,0	5,4
	260	400	104	4,0	364,0	312,8			15,0	8,0	6,6
280	280	380	100	2,1			312,0	345,6	15,0	8,0	5,4
	280	420	106	4,0	384,0	332,8			15,0	8,0	6,9
300	300	420	118	3,0			339,0	379,0	17,7	9,5	6,3
	300	460	118	4,0	418,0	360,4			17,7	9,5	7,5
320	320	440	118	3,0			359,0	399,0	17,7	9,5	6,3
	320	480	121	4,0	438,0	380,4			17,7	9,5	8,0
340	340	460	118	3,0			379,0	419,0	17,7	9,5	6,3
	340	520	133	5,0	473,0	409,0			17,7	9,5	8,8
360	360	480	118	3,0			399,0	439,0	17,7	9,5	6,3
	360	540	134	5,0	493,0	429,0			17,7	9,5	8,8
380	380	520	140	4,0			426,0	470,0	17,7	9,5	7,2
	380	560	135	5,0	513,0	449,0			17,7	9,5	9,1
400	400	540	140	4,0			446,0	491,0	17,7	9,5	7,2
	400	600	148	5,0	549,0	477,0			17,7	9,5	9,5
420	420	560	140	4,0			466,0	511,0	17,7	9,5	7,2
	420	620	150	5,0	569,0	497,0			17,7	9,5	10,0
440	440	600	160	4,0			490,0	545,0	17,7	9,5	6,8
	440	650	157	6,0	597,0	520,0			23,5	12,5	10,2
460	460	620	160	4,0			510,0	564,0	17,7	9,5	6,8
	460	680	163	6,0	624,0	544,0			23,5	12,5	10,9
480	480	650	170	5,0			534,0	593,0	17,7	9,5	7,2
	480	700	165	6,0	644,0	564,0			23,5	12,5	11,2
500	500	670	170	5,0			554,0	613,0	17,7	9,5	7,2
	500	720	167	6,0	664,0	584,0			23,5	12,5	11,7

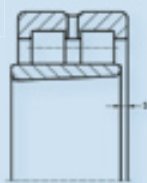
21. Size tables

Figure 1:12.1



NNU30.K

Figure 1:12.2



NNU49.K

	Rated load (KN)		Speed limit (min ^{-one})		Code	Weight
	C dyn.	Co stat.	grease	oil	bearing	kg
	413	885	2800	3400	NNU4938K.M.HP	10,2
	563	1039	2600	3200	NN3038K.M.HP	17,3
	488	1040	2600	3200	NNU4940K.M.HP	14,5
	655	1190	2400	3000	NN3040K.M.HP	22,2
	505	1139	2400	3000	NNU4944K.M.HP	15,7
	806	1454	2200	2800	NN3044K.M.HP	29,1
	525	1206	2200	2800	NNU4948K.M.HP	16,8
	838	1577	2000	2600	NN3048K.M.HP	31,6
	755	1690	2000	2600	NNU4952K.M.HP	29,3
	1073	2006	1900	2400	NN3052K.M.HP	46,2
	764	1794	1900	2400	NNU4956K.M.HP	31,2
	1085	2093	1800	2200	NN3056K.M.HP	49,7
	1040	2380	1700	2000	NNU4960K.M.HP	48,7
	1256	2402	1600	1900	NN3060K.M.HP	68,8
	1084	2527	1600	1900	NNU4964K.M.HP	51,0
	1330	2600	1600	1900	NN3064K.M.HP	74,2
	1095	2670	1500	1800	NNU4968K.M.HP	56,3
	1625	3220	1400	1700	NN3068K.M.HP	99,3
	1137	2820	1500	1800	NNU4972K.M.HP	59,2
	1665	3350	1400	1700	NN3072K.M.HP	104
	1434	3620	1400	1700	NNU4976K.M.HP	87,5
	1695	3480	1300	1600	NN3076K.M.HP	110
	1490	3821	1300	1600	NNU4980K.M.HP	91,7
	2160	4500	1200	1500	NN3080K.M.HP	143
	1546	4022	1300	1600	NNU4984K.M.HP	95,4
	2100	4520	1200	1500	NN3084K.M.HP	148
	2010	5157	1200	1500	NNU4988K.M.HP	133
	2460	5120	1100	1400	NN3088K.M.HP	170
	2092	5457	1100	1400	NNU4992K.M.HP	135
	2610	5395	1100	1400	NN3092K.M.HP	197
	2326	6113	1100	1400	NNU4996K.M.HP	156
	2690	5860	1000	1300	NN3096K.M.HP	203
	2258	5900	1000	1300	NNU49/500K.M.HP	161
	2600	5840	1000	1300	NN30/500K.M.HP	212

22. The terms and symbols in accordance with DIN ISO 1132-1, DIN 620

22.1. The diameter of the holes

d	The nominal bore diameter
d_s	Individual hole diameter
d_{sp}	The individual aperture diameter in a single plane
Δ_{ds}	Deviation of the individual hole diameter, the difference between the individual hole diameter and the nominal diameter of the holes. $\Delta_{ds} = D_s - d$
V_{ds}	Changing the orifice diameter, the difference between the largest and smallest diameter of individual separate ring opening, $V_{ds} = d_{smax} - d_{smin}$
d_m	The average diameter of the holes, the arithmetic mean of the largest and smallest diameter of individual separate ring opening, $D_m = (d_{smay} + d_{smin}) / 2$
Δ_{dm}	Deviation of the average hole diameter, the difference between the average hole diameter and the nominal diameter of the hole. $\Delta_{dm} = D_m - d$
d_{mp}	The average diameter of the hole in one plane, the arithmetic mean of the largest and smallest diameter of the individual holes defined in a radial plane, $d_{mp} = (d_{spmax} + d_{spmin}) / 2$
Δ_{dmp}	Deviation of the average hole diameter in one plane, the difference between the average hole diameter and the nominal diameter of the holes in a radial plane. $\Delta_{dmp} = D_{mp} - d$
V_{dp}	Changing the diameter of the individual holes in the same plane, the difference between the largest and the smallest diameter of the individual holes defined in a separate radial plane, $V_{dp} = d_{pmax} - d_{pmin}$
V_{dmp}	Change of the average hole diameter, the difference between the largest and the smallest average diameter of the holes defined in separate radial planes, respectively, on a separate ring, $V_{dmp} = d_{mpmax} - d_{mpmin}$
$V_{dp} / 2$	roundness level

22.2. The diameter of the shell

D	Nominal casing diameter (outer diameter)
D_s	Individual shell diameter
D_{sp}	Individual shell diameter in one plane
Δ_{Ds}	Deviation of the individual shell diameter, the difference between the individual cladding diameter and the nominal diameter of the shell. $\Delta_{Ds} = D_s - D$
V_{Ds}	Changing the cladding diameter, the difference between the largest and smallest diameter of individual separate ring shell, $V_{Ds} = D_{smax} - D_{smin}$
D_m	The average diameter of the shell, the arithmetic mean of the largest and smallest diameter of the individual shell of a separate ring, $D_m = (D_{smax} + D_{smin}) / 2$
Δ_{Dm}	Deviation of average diameter of the shell, the difference between a mean cladding diameter and the nominal diameter of the shell. $\Delta_{Dm} = D_m - D$
D_{mp}	The average diameter of the cladding in the same plane, the arithmetic mean of the largest and smallest of the individual shell diameter defined in a radial plane, $D_{mp} = (D_{spmax} + D_{spmin}) / 2$
Δ_{Dmp}	Deviation of the mean diameter of the casing in one plane, the difference between the average diameter and the nominal diameter of the shell casing in separate radial plane, $\Delta_{Dmp} = D_{mp} - D$
V_{Dp}	Changing the diameter of individual shells in the same plane, the difference between the highest and lowest individual shell diameter defined in a separate radial plane, $V_{Dp} = D_{pmax} - D_{pmin}$
V_{Dmp}	Change of the average shell diameter, the difference between the largest and the smallest average diameter of the shell, as determined in the individual radial planes, respectively, on a separate ring, $V_{Dmp} = D_{mpmax} - D_{mpmin}$

22. The terms and symbols in accordance with DIN ISO 1132-1, DIN 620

22.3. Width

B	The nominal width of the inner ring
C	The nominal width of the outer ring
B _s	Individual width of the inner ring
C _s	Individual outer ring width
ΔB _s	Deviation of the individual width of the inner ring, the difference between the individual width of the inner ring and the nominal width of the inner ring, ΔB _s = B _s - B
ΔC _s	Deviation of the individual width of the outer ring, the difference between the individual width of the outer ring and the outer ring face width ΔC _s = C _s - C
V _{Bs}	Changing the width of the inner ring, the difference between the largest and smallest width of the actual individual separate inner ring, V _{Bs} = B _{smax} - B _{smin}
V _{Cs}	Changing the width of the outer ring, the difference between the largest and smallest width of the actual individual separate outer ring, V _{Cs} = C _{smax} - C _{smin}
B _m	The average width of the inner ring, the arithmetic mean of the highest and lowest individual ring width, defined by the outer ring, B _m = (B _{smax} + B _{smin}) / 2
C _m	The average width of the outer ring, the arithmetic mean of the highest and lowest individual ring width, defined by the outer ring, C _m = (C _{smax} + C _{smin}) / 2

22.4. The radius of curvature

The nominal dimensions of the chamfer	
r _s	Individual sizes chamfer
r _{smin}	The minimum size of the individual chamfer, the minimum allowable and individual radial and axial dimensions of the bevel ring
r _{smax}	The maximum individual size of chamfer, the maximum allowable, and the individual radial and axial dimensions of the bevel ring

22.5. 22.5. Changing the wall thickness

Ki	Changing the wall thickness between the inner ring / raceway and the bore, the difference between the largest and the smallest radial distance between the hole surface and the raceway on the outer side of the inner ring raceway at the middle
Ke	Changing the wall thickness between the outer ring / raceway and the outer ring / shell, the difference between the largest and the smallest radial distance between the envelope surface and the raceway on the inner side of the outer ring in the middle of the raceways

22. Terms and symbols in accordance with DIN ISO 1132-1, DIN 620

22.6. Distance accuracy

22.6.1. Radial runout

K_{ia}	Radial runout inner ring assembled to the bearing, the difference between the largest and the smallest radial distance between the inner surface of the hole of the ring with a different angular position of the inner ring and a fixed point belonging to the outer ring
K_{ea}	Radial runout of the outer ring in the assembled bearing, the difference between the largest and the smallest radial distance between the surface of the outer shell ring, with a different angular position of the outer ring, and a fixed point relating to the inner ring

22.6.2. Runout

S_{ia}	The axial runout of the inner ring in the assembled bearing, the difference between the largest and smallest axial distance between the support side surface of the inner ring, with a different angular position of the inner ring at a radial distance from the axis of the inner ring is equal to half the diameter of the raceway of the inner ring, and a fixed point, relating to the outer ring
S_{ea}	The axial runout of the outer ring in the assembled bearing, the difference between the largest and smallest axial distance between the support side surface of the outer ring, with a different angular position of the outer ring at a radial distance from the axis of the outer ring is equal to half the diameter of the raceway of the outer ring, and a fixed point, relating to the inner ring

22.6.3. lateral runout

S_d	Axial runout side surface of the inner ring to the hole (lateral runout)
SD	The change in slope to the reference line shell side surface (lateral runout)

23.1. General provisions

As lubricants one can use grease and oil. The lubricant is a supporting member that separates the rolling elements and the sliding elements from each other.

It is therefore necessary to provide lubrication at all points of contact. In the case of continuous lubrication it also provides cooling of the bearing. Selecting the mode of lubrication depends on various operating conditions such as speed, temperature and load.

23.2.1. Grease lifetime

Efficacy lubricant deteriorates during operation and therefore has a corresponding effect on the bearing performance. That is why the grease life is considered a key factor in the fatigue life of the bearing.

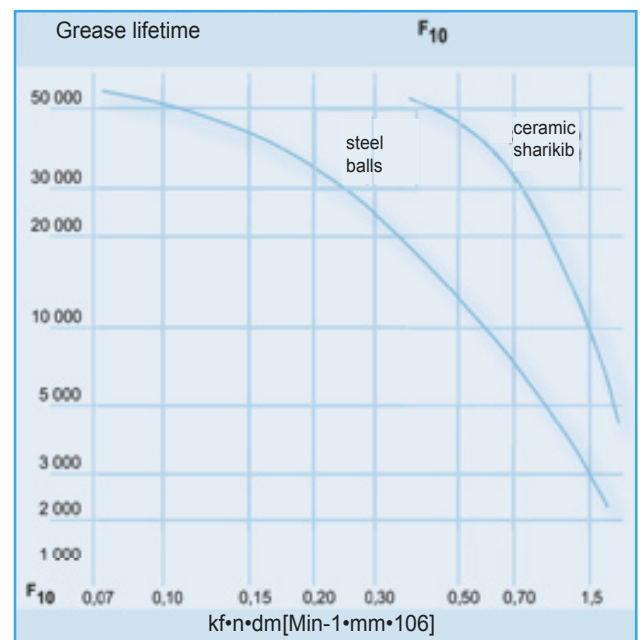
kf	1 for N10 and N19
kf	2 and NN30 NNU49
kf	0.75 to spindle bearing with contact angle of 15 °
kf	0.9 for the spindle bearings with contact angle of 25 °
n	Rotational speed
dm	The average diameter of the bearing $(D + d) / 2$

23.2 Grease

Grease normally used for lubricating bearings, if not assumed to be extremely high speed. The advantages of grease lubrication are:

- Less design complexity
- Less complexity
- The possibility of lubrication for life
- Compact dimensions for seals and lubrication equipment
- ecological purity

Due to the constant improvements and innovations in the production of grease lubricants could greatly increase the speed of rotation of the bearing. Use of the grease and leak bearings also provide their maximum purity, since the inside of the bearing is protected from dirt.



23. Grease

23.2.2. Running-in grease

The performance of the bearings and, consequently, their lifespan affect positive thorough commissioning lubricated bearings. It is recommended to apply the process of burnishing, which consists of a period of operation and downtime.

This ensures an even distribution of the grease and prevents overheating of the bearings during operation. For use in high speed running conditions of the process should be carried out at a speed component first 50% and then 75% of the expected speed. The required number of running cycles may vary depending on the size and number of bearings as well as of the maximum speed of the bearing and surrounding environment.

As a rule, we recommend the following start / stop cycle:

Скорость	Время работы	Время простоя	Повторение	Общее время
0,5 * n_{max}	20 с	2 мин	5x	11 мин 40 с
0,75 * n_{max}	20 с	2 мин	5x	11 мин 40 с
n_{max}	20 с	2 мин	5x	11 мин 40 с
n_{max}	30 с	2 мин	10x	25 мин
n_{max}	1 мин	1 мин	10x	20 мин

If you set the temperature has not been reached, additional cycles are performed with longer periods of operation and shorter downtime periods.

Speed	Working hours	Downtime	Reiteration	Total time
0,5 * n_{max}	20	2 minutes	5x	11 min 40 s
0,75 * n_{max}	20	2 minutes	5x	11 min 40 s
n_{max}	20	2 minutes	5x	11 min 40 s
n_{max}	30	2 minutes	10x	25 min
n_{max}	1 minute	1 minutes	10x	20 minutes

23.2.3. Grease

Grease corresponds to the value N, is typically used for filling the bearing spindle, and is approx. 50% of the free internal space of the bearing.

Spindle bearings					
series bearings	HS719	HS70	B719	B70	B72
	HC719 XC719	HC70 XC70	HCB719 XCB719	HCB70 XCB70	HCB72 XCB72
number of holes	Grease in cm ³ bearing				
02	0.25	0.43	0.16	0.31	0.47
03	0.29	0.55	0.16	0.42	0.63
04	0.41	0.92	0.31	0.7	1.2
05	0.5	0.87	0.36	0.8	1.4
06	0.64	1.38	0.39	1.16	2.2
07	0.94	2	0.74	1.52	2.9
08	1.56	2.5	1.12	2	3.7
09	1.71	3.6	1.31	2.8	4.4
ten	1.77	four	1.45	2.7	4.2
eleven	2.4	5.5	1.88	3.6	6.3
12	2.5	5.3	2.3	4.1	7.8
13	2.7	6.4	2.4	4.2	8.9
14	4.4	eight	four	7.1	9.6
15	five	9	4.4	7.5	12.5
16	4.3	9.8	4.1	10.2	11.9
17	7.6	12	6	9.9	17.8
18	7.7	14.9	6.1	11.5	18.5

Spindle bearings					
series bearings	HS719	HS70	B719	B70	B72
	HC719 XC719	HC70 XC70	HCB719 XCB719	HCB70 XCB70	HCB72 XCB72
number of holes	Grease in cm ³ bearing				
nineteen	8.8	17.2	6.7	13.3	25.3
20	10.8	16.6	10.2	12.3	26.4
21	12	23.1	10.1	14.4	35.2
22	13.2	26.5	9.5	20.7	42.6
24	16.1	28.5	14.2	21.2	37.6
26	20.8	41.1	16.4	35.5	40.6
28	25.6	46.3	15.6	37.6	56.8
thirty	37.8	57.1	26.5	42.9	78.9
32	39.9	69.7	28.8	55.9	99.8
34			30.4	62.7	117
36			45.5	91.1	122
38			48	95.1	151
40			67.8	114	182
44			65.6	166	243
48			70.8	178	
52			113		
56			121		

23. Grease

High precision cylindrical roller bearings				
series bearings	N19	N10	NN30	NNU49
number of holes	Grease in cm ³ per bearing			
06		0.66	0.72	
07		0.86	0.90	
08		1.09	1.34	
09		1.37	1.53	
ten	0.77	1.48	1.65	
eleven	1.00	2.10	2.40	
12	1.07	2.30	2.60	
13	1.14	2.50	2.70	
14	1.95	2.90	4.00	
15	2.10	3.10	4.20	
16	2.20	4.10	5.80	
17	3.00	4.30	6.10	
18	3.10	5.50	7.50	
nineteen	3.30	5.70	7.80	
20	3.80	5.90	8.10	6.1
21	4.00	7.40	10,10	6.3
22	4.20	8.10	13,00	6.5
24	5.60	8.60	15,10	9.8
26	7.30	14,20	20.10	13.2
28	7.60	14,90	22,90	11.7
thirty	11.40	18,10	27.80	20.6
32	12,00	21.90	35,30	21.7
34	12.60	29,30	46.40	22.9
36	18,10	36,40	60.30	31.7
38	19,00	53,00	64,00	33.2
40	28,20	65.50	82,40	52.9
44	30.50	68,90	105.00	57.2
48	32,80	107.00	121,00	61.7
52	50,00	113.00	168,00	106.0
56	53,10	150,00	187,00	113.0

23.3. lubricating oil

If the operating speed and temperature exceed the permissible values for the grease, use an oil lubricant. Desirable methods lubricant may be grease and oil mist lubrication of the air-oil mixture. Both of these methods provide the minimum volume lubrication grease and therefore minimal friction losses. A greater amount of oil used for lubrication and cooling, can increase the dissipation of heat from the bearing, but simultaneously deteriorates the performance of the bearing. Lubricating oil must have sufficient viscosity to create a bearing lubricating film on the rolling surfaces and the sliding surfaces of the bearing. In this crucial oil viscosity at operating temperature. viscosity should be lower than at higher rotational speeds. The lubricating oil should be selected in accordance with a nominal viscosity at a reference temperature of 40 ° C. Oils having a nominal viscosity of 68 mm² / s, are suitable, taking into account that the conventional approach currently is the method of lubrication air-oil mixture. Useful oils should have a purity grade 13/10, in accordance with ISO 4406. Typical amounts of oil taken depending on injection volume - 3, 5, 10, 30, 60 and 100 mm³, and the injection rate - from 6 to 10 injections per hour .

