

Thrust Cylindrical Roller Bearings

Thrust cylindrical roller bearings are suitable for arrangements that have to support heavy axial loads. They are relatively insensitive to shock loads, very durable and require little axial space. As a standard, they are available as single direction bearings and can only accommodate axial loads acting in one direction.

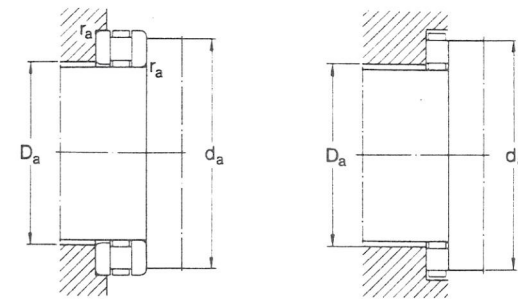
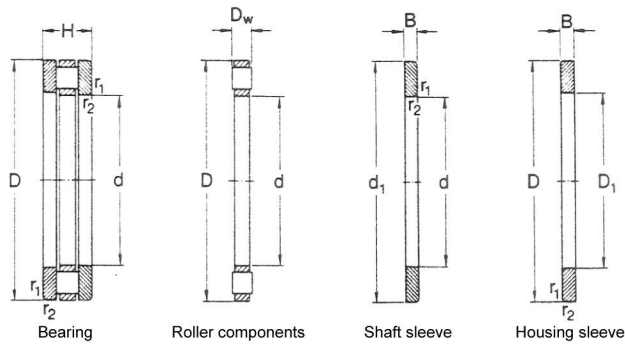
Thrust cylindrical roller bearings are simple in form and design. 811XX and 812XX series are mainly used where thrust ball bearings have insufficient load carrying capacity.

The cylindrical surface of the rollers is slightly relieved towards the ends. The resulting contact profile virtually eliminates damaging edge stresses. The bearings are of separable design; the individual components can be mounted separately.

M: A machined brass cage, roller guiding

TN: An injection molded cage of glass fiber reinforced polyamide 6.6, roller guiding

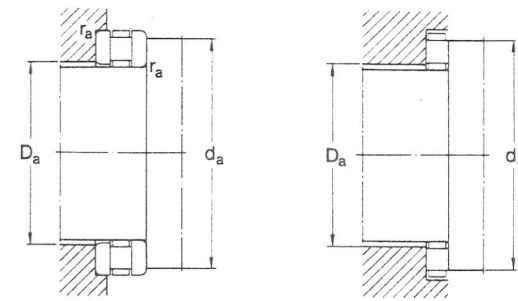
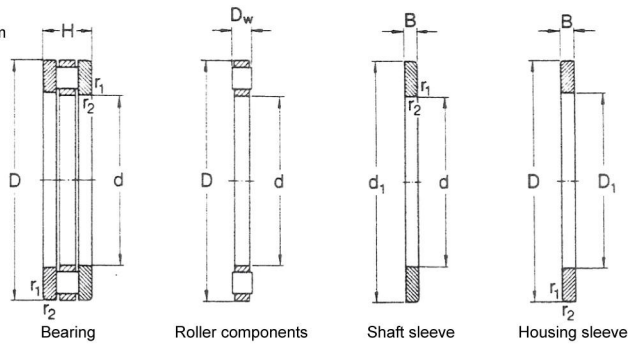
Bore diameter d: 15~80mm



dimensions			Basic load rating		Limiting speed (rpm)		Ref. Weight (kg)	Designation
d	D	H	Dynamic Cr(N)	Static Cor(N)	Grease	Oil		
15	28	9	11200	12000	3200	4300	0.024	81102
17	30	9	11600	12900	3200	4300	0.027	81103
20	35	10	17600	19600	2800	3800	0.037	81104
25	42	11	24000	29000	2200	3200	0.053	81105
30	47	11	24500	31000	2000	3000	0.057	81106
	52	16	50000	58500	1700	2400	0.12	81206
35	52	12	27000	37500	1900	2800	0.073	81107
	62	18	62000	83000	1500	2000	0.20	81207
40	60	13	38000	52000	1700	2400	0.11	81108
	68	19	83000	112000	1400	1900	0.25	81208
45	65	14	40500	58500	1600	2200	0.13	81109
	73	20	86500	120000	1300	1800	0.30	81209
50	70	14	42500	64000	1600	2200	0.14	81110
	78	22	91500	134000	1200	1700	0.36	81210
55	78	16	69500	127000	1400	1900	0.22	81111
	90	25	116000	163000	950	1400	0.57	81211
60	85	17	80000	134000	1300	1800	0.27	81112
	95	26	137000	204000	950	1400	0.64	81212
65	90	18	83000	143000	1200	1700	0.31	81113
	100	27	140000	216000	900	1300	0.72	81213
70	95	18	86500	153000	1200	1700	0.33	81114
	105	27	146000	236000	900	1300	0.77	81214
75	100	19	75000	129000	1100	1600	0.38	81115
	110	27	125000	193000	850	1200	0.81	81215
80	105	19	76500	134000	1000	1500	0.40	81116
	115	28	160000	270000	850	1200	0.90	81216

Dimensions			Abutment and fillet Dimensions						Parts of roll	blowout patch	pedestal ring
d	d ₁	D ₁	D _w	B	r ₁₂ (min)	d _a (min)	D _a (max)	r _a (max)			
15	28	16	3.5	2.75	0.3	27	16	0.3	K81102	WS81102	GS81102
17	30	18	3.5	2.75	0.3	29	18	0.3	K81103	WS81103	GS81103
20	35	21	4.5	2.75	0.3	34	21	0.3	K81104	WS81104	GS81104
25	42	26	5	3	0.6	41	26	0.6	K81105	WS81105	GS81105
30	47	32	5	3	0.6	46	31	0.6	K81106	WS81106	GS81106
	52	32	7.5	4.25	0.6	50	31	0.6	K81206	WS81206	GS81206
35	52	37	5	3.5	0.6	51	36	0.6	K81107	WS81107	GS81107
	62	37	7.5	5.25	1	58	39	1	K81207	WS81207	GS81207
40	60	42	6	3.5	0.6	58	42	0.6	K81108	WS81108	GS81108
	68	42	9	5	1	66	43	1	K81208	WS81208	GS81208
45	65	47	6	4	0.6	63	47	0.6	K81109	WS81109	GS81109
	73	47	9	5.5	1	70	48	1	K81209	WS81209	GS81209
50	70	52	6	4	0.6	68	52	0.6	K81110	WS81110	GS81110
	78	52	9	6.5	1	75	53	1	K81210	WS81210	GS81210
55	78	57	6	5	0.6	77	56	0.6	K81111	WS81111	GS81111
	90	57	11	7	1	85	59	1	K81211	WS81211	GS81211
60	85	62	7.5	4.75	1	82	62	1	K81112	WS81112	GS81112
	95	62	11	7.5	1	91	64	1	K81212	WS81212	GS81212
65	90	67	7.5	5.25	1	87	67	1	K81113	WS81113	GS81113
	100	67	11	8	1	96	69	1	K81213	WS81213	GS81213
70	95	72	7.5	5.25	1	92	72	1	K81114	WS81114	GS81114
	105	72	11	8	1	102	74	1	K81214	WS81214	GS81214
75	100	77	7.5	5.75	1	97	78	1	K81115	WS81115	GS81115
	110	77	11	8	1	106	79	1	K81215	WS81215	GS81215
80	105	82	7.5	5.75	1	102	83	1	K81116	WS81116	GS81116
	115	82	1.1	8	1	112	84	1	K81216	WS81216	GS81216

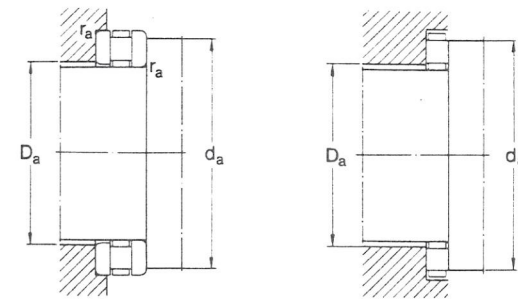
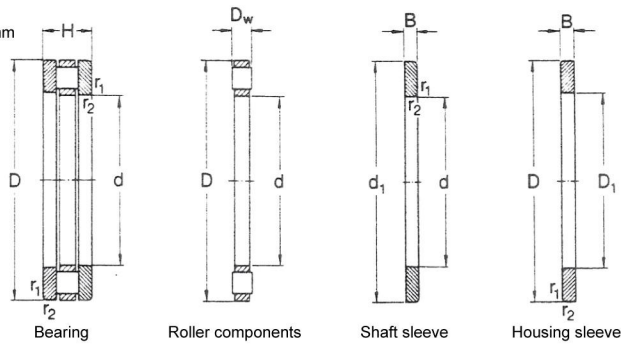
Bore diameter d: 85~220mm



d	dimensions		Basic load rating		Limiting speed (rpm)		Ref. Weight (kg)	Designation
	D	H	Dynamic Cr(N)	Static Cor(N)	Grease	Oil		
80	110	19	76500	137000	1000	1500	0.42	81117
	125	31	153000	245000	800	1100	1.30	81217
90	120	22	104000	183000	900	1300	0.64	81118
	135	35	232000	390000	750	1000	1.75	81218
100	135	25	146000	260000	850	1200	1.00	81120
	150	38	224000	385000	670	900	2.20	81220
110	145	25	153000	280000	800	1100	1.10	81122
	160	38	240000	405000	630	850	2.45	81222
120	155	25	160000	300000	800	1100	1.15	81124
	170	39	245000	425000	600	800	2.70	81224
130	170	30	183000	345000	700	950	1.70	81126
	190	45	335000	560000	530	700	4.20	81226
140	180	31	193000	375000	670	900	1.95	81128
	190	46	360000	620000	530	700	4.55	81228
150	190	31	200000	400000	630	850	2.05	81130
	215	50	465000	830000	480	630	5.90	81230
160	200	31	204000	425000	630	850	2.20	81132
	225	51	480000	880000	450	600	6.20	81232
170	215	34	260000	530000	600	800	2.95	81134
	240	55	540000	1020000	430	560	7.70	81234
180	225	34	270000	560000	560	750	3.05	81136
	250	56	550000	1060000	430	560	8.25	81236
190	240	37	310000	655000	530	700	3.85	81138
	270	62	695000	1320000	380	500	10.5	81238
200	250	37	310000	670000	530	700	4.00	81140
	280	62	720000	1370000	380	500	12.0	81240
220	270	37	335000	750000	500	670	4.50	81144
	300	63	750000	1500000	360	480	13.0	81244

d	Dimensions				Abutment and fillet Dimensions				Parts of roll	blowout patch	pedestal ring
	d ₁	D ₁	D _w	B	r ₁₂ (min)	d _a (min)	D _a (max)	r _a (max)			
80	110	87	7.5	5.75	1	108	87	1	K81117	WS81117	GS81117
	125	88	12	9.5	1	119	90	1	K81217	WS81217	GS81217
90	120	92	9	6.5	1	117	93	1	K81118	WS81118	GS81118
	135	93	14	10.5	1.1	129	95	1	K81218	WS81218	GS81218
100	135	105	11	7	1	131	104	1	K81120	WS81120	GS81120
	150	103	15	11.5	1.1	142	107	1	K81220	WS81220	GS81220
110	145	112	11	7	1	141	114	1	K81122	WS81122	GS81122
	160	113	15	11.5	1.1	152	117	1	K81222	WS81222	GS81222
120	155	122	11	7	1	151	124	1	K81124	WS81124	GS81124
	170	123	15	12	1.1	162	127	1	K81224	WS81224	GS81224
130	170	132	12	9	1	165	135	1	K81126	WS81126	GS81126
	187	133	19	13	1.5	181	137	1.5	K81226	WS81226	GS81226
140	178	142	12	9.5	1	175	145	1	K81128	WS81128	GS81128
	197	143	19	13.5	1.1	191	147	1.5	K81228	WS81228	GS81228
150	188	152	12	9.5	1	185	155	1	K81130	WS81130	GS81130
	212	153	21	14.5	1.1	211	158	1.5	K81230	WS81230	GS81230
160	198	162	12	9.5	1	195	165	1	K81132	WS81132	GS81132
	222	163	21	15	1.5	220	168	1.5	K81232	WS81232	GS81232
170	213	172	14	10	1.1	209	176	1	K81134	WS81134	GS81134
	237	173	22	16.5	1.5	235	180	1.5	K81234	WS81234	GS81234
180	222	183	14	10	1.1	219	185	1	K81136	WS81136	GS81136
	247	183	22	17	1.5	245	190	1.5	K81236	WS81236	GS81236
190	237	193	15	11	1.1	233	197	1	K81138	WS81138	GS81138
	267	194	26	18	2	265	200	2	K81238	WS81238	GS81238
200	247	203	15	11	1.1	243	206	1	K81140	WS81140	GS81140
	277	204	26	18	2	275	210	2	K81240	WS81240	GS81240
220	267	223	15	11	1.1	263	226	1	K81144	WS81144	GS81144
	297	224	26	18.5	2	296	236	2	K81244	WS81244	GS81244

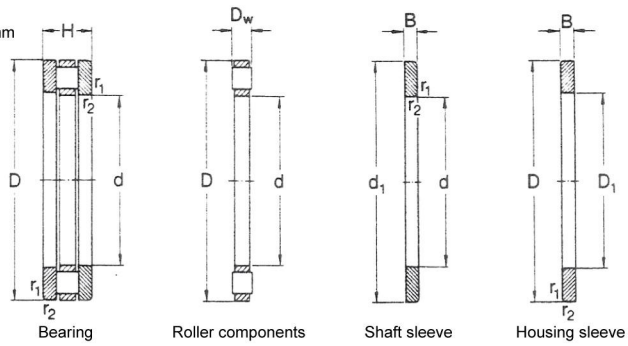
Bore diameter d: 240-550mm



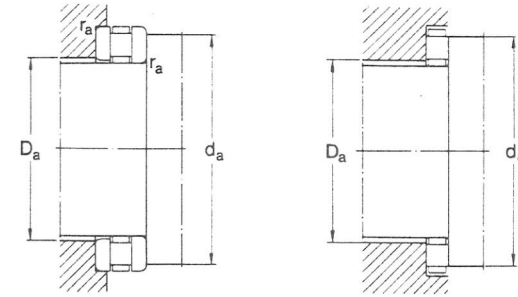
d	dimensions		Basic load rating		Limiting speed (rpm)		Ref. Weight (kg)	Designation
	D	H	Dynamic Cr(N)	Static Cor(N)	Grease	Oil		
240	300	45	475000	1080000	430	560	7.25	81148
	340	78	1100000	2160000	300	400	55.0	81248
260	320	45	490000	1140000	400	530	7.85	81152
	360	79	1140000	2360000	280	380	24.0	81252
280	350	53	680000	1600000	360	480	10.5	81156
	380	80	1160000	2450000	280	360	26.0	81256
300	380	62	850000	1960000	320	430	16.5	81160
	420	95	1530000	3200000	220	320	40.5	81260
320	400	63	880000	2080000	300	400	18.0	81164
	440	95	1560000	3350000	200	300	42.5	81264
340	420	64	900000	2200000	280	380	19.5	81168
	460	96	1630000	3600000	200	300	47.0	81268
360	440	65	915000	2240000	280	380	19.5	81172
	500	110	2160000	4650000	180	260	65.5	81272
380	460	65	930000	2360000	260	360	22.0	81176
	520	112	2200000	4800000	180	260	70.0	81276
400	480	65	965000	2450000	260	360	23.0	81180
	540	112	2240000	5000000	170	240	73.0	81280
420	500	65	980000	2600000	240	340	24.0	81184
	580	130	2850000	6200000	160	220	95.5	81284
440	540	80	1430000	3600000	200	300	39.5	81188
	600	130	2900000	6550000	160	220	110	81288
460	560	80	1460000	3750000	200	300	41.0	81192
	620	130	3000000	6700000	150	200	118	81292
480	580	80	1460000	3900000	190	280	43.0	81196
	650	135	3350000	7500000	150	200	128	81296
500	600	80	1530000	4050000	190	280	44.0	811/500
	670	135	3400000	7800000	140	190	133	812/500

d	Dimensions				Abutment and fillet Dimensions				Parts of roll	blowout patch	pedestal ring
	d ₁	D ₁	D _w	B	r ₁₂ (min)	d _a (min)	D _a (max)	r _a (max)			
240	297	243	18	13.5	1.5	296	248	1.5	K81148	WS81148	GS81148
	335	244	32	23	2.1	335	261	2	K81248	WS81248	GS81248
260	317	263	18	13.5	1.5	316	268	1.5	K81152	WS81152	GS81152
	355	264	32	23.5	2.1	353	280	2	K81252	WS81252	GS81252
280	347	283	22	15.5	1.5	346	288	1.5	K81156	WS81156	GS81156
	375	284	32	24	2.1	373	300	2	K81256	WS81256	GS81256
300	376	304	25	18.5	2	373	315	2	K81160	WS81160	GS81160
	415	304	38	28.5	3	416	328	2.5	K81260	WS81260	GS81260
320	396	324	52	19	2	394	334	2	K81164	WS81164	GS81164
	435	325	38	28.5	3	434	348	2.5	K81264	WS81264	GS81264
340	416	344	25	19.5	2	414	354	2	K81168	WS81168	GS81168
	455	345	38	29	3	452	367	2.5	K81268	WS81268	GS81268
360	436	364	25	20	2	434	374	2	K81172	WS81172	GS81172
	495	365	45	32.5	4	492	393	3	K81272	WS81272	GS81272
380	456	384	25	20	2	453	393	2	K71176	WS71176	GS71176
	515	385	45	33.5	4	511	413	3	K81276	WS81276	GS81276
400	476	404	25	20	2	473	413	2	K81180	WS81180	GS81180
	535	405	45	33.5	4	531	433	3	K81280	WS81280	GS81280
420	495	424	25	20	2	493	433	2	K81184	WS81184	GS81184
	575	425	52	39	5	571	459	4	K81284	WS81284	GS81284
440	535	444	32	24	2.1	533	459	2	K81188	WS81188	GS81188
	595	445	52	39	5	591	479	4	K81288	WS81288	GS81288
460	555	464	32	24	2.1	553	479	2	K81192	WS81192	GS81192
	615	465	52	39	5	611	499	4	K81292	WS81292	GS81292
480	575	484	32	24	2.1	573	500	2	K81196	WS81196	GS81196
	645	485	56	39.5	2	641	520	4	K81296	WS81296	GS81296
500	595	505	32	24	2.1	592	519	2	K811/500	WS811/500	GS811/500
	665	505	56	39.5	5	661	540	4	K812/500	WS812/500	GS812/500

Bore diameter d: 530-600mm



d	dimensions		Basic load rating		Limiting speed (rpm)		Ref. Weight (kg)	Designation
	D	H	Dynamic Cr(N)	Static Cor(N)	Grease	Oil		
530	640	85	1700000	4550000	180	260	55.5	811/530
	710	140	3800000	9000000	130	180	154	812/530
560	670	85	1760000	4800000	180	260	58.0	811/560
	750	150	3900000	9300000	120	170	187	812/560
600	710	85	1760000	5000000	170	240	62.0	811/600
	800	160	4400000	10600000	110	160	240	811/600



d	Dimensions				Abutment and fillet Dimensions				Parts of roll	blowout patch	pedestal ring
	d ₁	D ₁	D _w	B	r ₁₂ (min)	d _a (min)	D _a (max)	r _a (max)			
530	635	535	34	25.5	3	632	554	2.5	K811/530	WS811/530	GS811/530
	705	535	60	40	5	701	572	4	K812/530	WS812/530	GS812/530
560	665	565	34	25.5	3	662	584	2.5	K811/560	WS811/560	GS811/560
	745	565	60	45	5	741	611	4	K812/560	WS812/560	GS812/560
600	705	605	34	25.5	3	702	624	2.5	K811/600	WS811/600	GS811/600
	795	605	64	48	5	789	651	4	K811/600	WS811/600	GS811/600