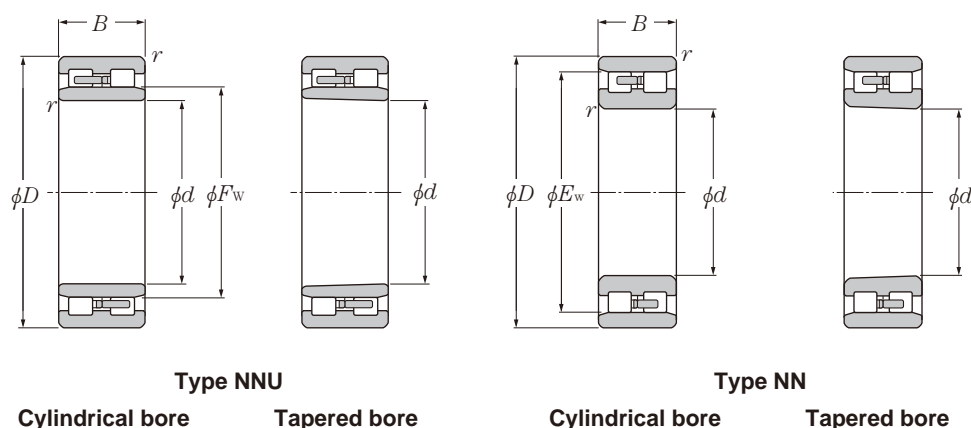


● Double Row Cylindrical Roller Bearings

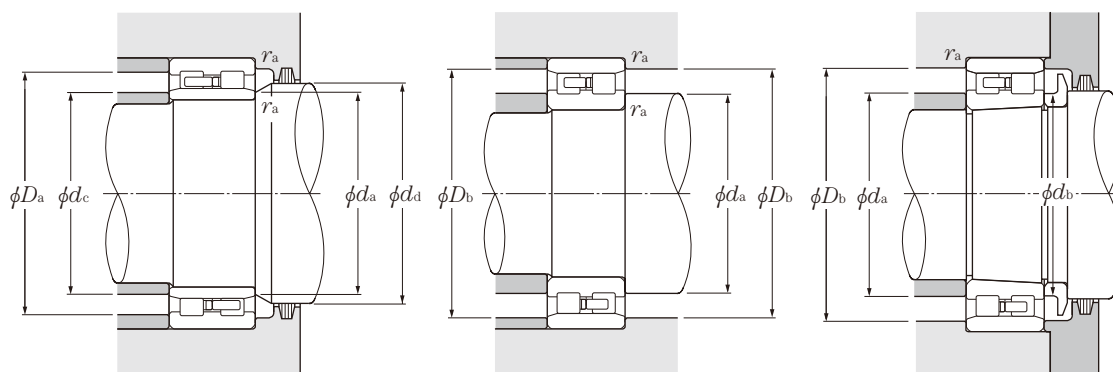


d 25 ~ 110mm

d	Boundary dimensions			Basic load ratings				Limiting speeds		Bearing	
	D	B	$r_{s\ min}^{2)}$	dynamic kN	static C_{or}	dynamic kgf	static C_{or}	grease	oil	type NNU	
	mm									cylindrical bore	tapered ¹⁾ bore
25	47	16	0.6	25.8	30.0	2 630	3 050	14 000	17 000	—	—
30	55	19	1	31.0	37.0	3 150	3 800	12 000	15 000	—	—
35	62	20	1	38.0	47.5	3 850	4 850	11 000	13 000	—	—
40	68	21	1	43.5	55.5	4 400	5 650	9 700	11 000	—	—
45	75	23	1	52.0	68.5	5 300	7 000	8 800	10 000	—	—
50	80	23	1	53.0	72.5	5 400	7 400	8 000	9 400	—	—
55	90	26	1.1	69.5	96.5	7 050	9 850	7 300	8 600	—	—
60	95	26	1.1	71.0	102	7 250	10 400	6 700	7 900	—	—
65	100	26	1.1	75.0	111	7 650	11 400	6 200	7 300	—	—
70	110	30	1.1	94.5	143	9 650	14 600	5 800	6 800	—	—
75	115	30	1.1	96.5	149	9 850	15 200	5 400	6 300	—	—
80	125	34	1.1	116	179	11 800	18 200	5 100	5 900	—	—
85	130	34	1.1	122	194	12 400	19 800	4 800	5 600	—	—
90	140	37	1.5	143	228	14 600	23 200	4 500	5 300	—	—
95	145	37	1.5	146	238	14 900	24 200	4 300	5 000	—	—
100	140	40	1.1	131	260	13 300	26 500	4 300	5 100	NNU4920	NNU4920K
	150	37	1.5	153	256	15 600	26 100	4 000	4 800	—	—
105	145	40	1.1	133	268	13 500	27 400	4 100	4 800	NNU4921	NNU4921K
	160	41	2	198	320	20 200	33 000	3 800	4 500	—	—
110	150	40	1.1	137	284	14 000	28 900	3 900	4 600	NNU4922	NNU4922K
	170	45	2	229	375	23 300	38 000	3 600	4 300	—	—

1) "K" indicates bearings have tapered bore with a taper ratio of 1: 12. 2) Smallest allowable dimension for chamfer dimension r .

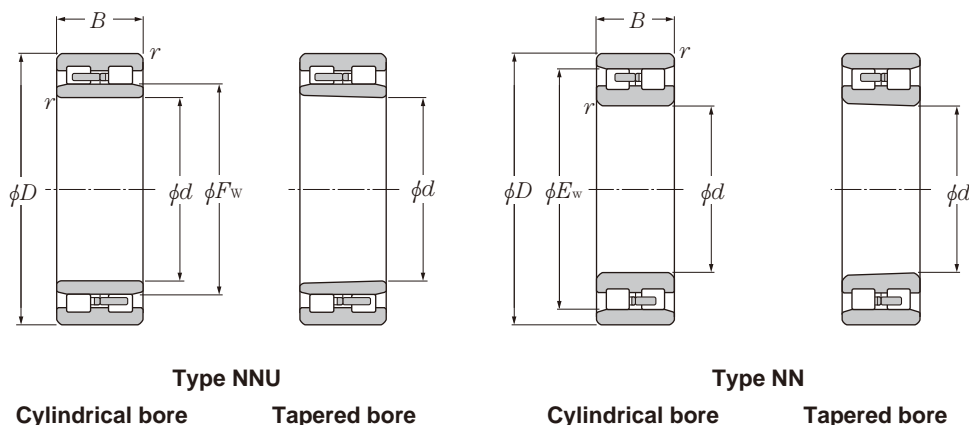
● Double Row Cylindrical Roller Bearings



Dynamic equivalent radial load
 $P_r = F_r$
 Static equivalent radial load
 $P_{0r} = F_r$

numbers	Dimensions		Abutment and fillet dimensions									Mass (approx.)			
	type NN	mm	mm									kg		kg	
cylindrical bore	tapered ¹⁾ bore	F_w	E_w	d_a min	d_b min	d_c max	d_d min	D_a max	D_b max	D_b min	r_{as} max	type NNU cylindrical bore	tapered bore	type NN cylindrical bore	tapered bore
NN3005	NN3005K	—	41.3	29	30	—	—	—	43	42	0.6	—	—	0.124	0.121
NN3006	NN3006K	—	48.5	35	36.5	—	—	—	50	49	1	—	—	0.199	0.193
NN3007	NN3007K	—	55	40	41.5	—	—	—	57	56	1	—	—	0.242	0.235
NN3008	NN3008K	—	61	45	47	—	—	—	63	62	1	—	—	0.312	0.303
NN3009	NN3009K	—	67.5	50	52	—	—	—	70	69	1	—	—	0.405	0.393
NN3010	NN3010K	—	72.5	55	57	—	—	—	75	74	1	—	—	0.433	0.419
NN3011	NN3011K	—	81	61.5	63.5	—	—	—	83.5	82	1	—	—	0.651	0.631
NN3012	NN3012K	—	86.1	66.5	68.5	—	—	—	88.5	87	1	—	—	0.704	0.683
NN3013	NN3013K	—	91	71.5	73.5	—	—	—	93.5	92	1	—	—	0.758	0.735
NN3014	NN3014K	—	100	76.5	79	—	—	—	103.5	101	1	—	—	1.04	1.01
NN3015	NN3015K	—	105	81.5	84	—	—	—	108.5	106	1	—	—	1.14	1.11
NN3016	NN3016K	—	113	86.5	89.5	—	—	—	118.5	114	1	—	—	1.52	1.47
NN3017	NN3017K	—	118	91.5	94.5	—	—	—	123.5	119	1	—	—	1.61	1.56
NN3018	NN3018K	—	127	98	101	—	—	—	132	129	1.5	—	—	2.07	2.01
NN3019	NN3019K	—	132	103	106	—	—	—	137	134	1.5	—	—	2.17	2.1
NN4920	NN4920K	113	129	106.5	110	111	115	133.5	133.5	131	1	1.83	1.75	1.75	1.67
NN3020	NN3020K	—	137	108	111	—	—	—	142	139	1.5	—	—	2.26	2.19
NN4921	NN4921K	118	134	111.5	115	116	120	138.5	138.5	136	1	1.91	1.82	1.82	1.73
NN3021	NN3021K	—	146	114	117	—	—	—	151	148	2	—	—	2.89	2.8
NN4922	NN4922K	123	139	116.5	120	121	125	143.5	143.5	141	1	1.99	1.9	1.9	1.81
NN3022	NN3022K	—	155	119	123	—	—	—	161	157	2	—	—	3.69	3.56

● Double Row Cylindrical Roller Bearings

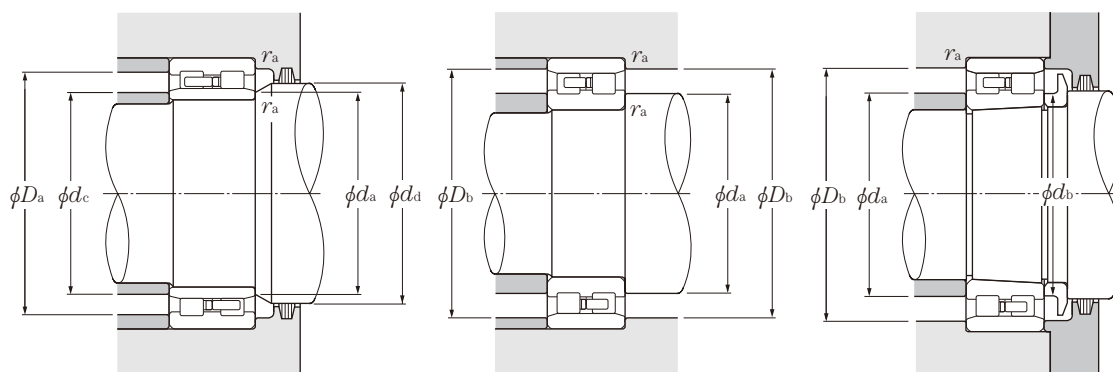


d 120 ~ 280mm

d	Boundary dimensions			Basic load ratings				Limiting speeds		Bearing	
	D	B	$r_{s\ min}^{2)}$	dynamic kN	static C_{or}	dynamic kgf	static C_{or}	grease	oil	cylindrical bore	tapered ¹⁾ bore
120	165	45	1.1	183	360	18 700	37 000	3 600	4 200	NNU4924	NNU4924K
	180	46	2	233	390	23 700	40 000	3 300	3 900	—	—
130	180	50	1.5	220	440	22 400	45 000	3 300	3 900	NNU4926	NNU4926K
	200	52	2	284	475	29 000	48 500	3 100	3 600	—	—
140	190	50	1.5	227	470	23 100	48 000	3 000	3 600	NNU4928	NNU4928K
	210	53	2	298	515	30 500	52 500	2 800	3 300	—	—
150	210	60	2	345	690	35 000	70 500	2 800	3 300	NNU4930	NNU4930K
	225	56	2.1	335	585	34 000	60 000	2 600	3 100	—	—
160	220	60	2	355	740	36 500	75 500	2 600	3 100	NNU4932	NNU4932K
	240	60	2.1	375	660	38 000	67 500	2 500	2 900	—	—
170	230	60	2	360	765	37 000	78 000	2 500	2 900	NNU4934	NNU4934K
	260	67	2.1	440	775	45 000	79 000	2 300	2 700	—	—
180	250	69	2	460	965	46 500	98 500	2 300	2 700	NNU4936	NNU4936K
	280	74	2.1	565	995	57 500	102 000	2 200	2 600	—	—
190	260	69	2	475	1 030	48 500	105 000	2 200	2 600	NNU4938	NNU4938K
	290	75	2.1	580	1 040	59 000	106 000	2 000	2 400	—	—
200	280	80	2.1	555	1 180	56 500	120 000	2 100	2 400	NNU4940	NNU4940K
	310	82	2.1	655	1 170	66 500	119 000	1 900	2 300	—	—
220	300	80	2.1	585	1 300	59 500	132 000	1 900	2 200	NNU4944	NNU4944K
	340	90	3	815	1 480	83 000	151 000	1 700	2 100	—	—
240	320	80	2.1	610	1 410	62 500	144 000	1 700	2 000	NNU4948	NNU4948K
	360	92	3	855	1 600	87 000	163 000	1 600	1 900	—	—
260	360	100	2.1	900	2 070	92 000	211 000	1 600	1 800	NNU4952	NNU4952K
	400	104	4	1 060	1 990	108 000	203 000	1 500	1 700	—	—
280	380	100	2.1	925	2 200	94 500	224 000	1 400	1 700	NNU4956	NNU4956K
	420	106	4	1 080	2 080	110 000	212 000	1 300	1 600	—	—

1) "K" indicates bearings have tapered bore with a taper ratio of 1: 12. 2) Smallest allowable dimension for chamfer dimension r .

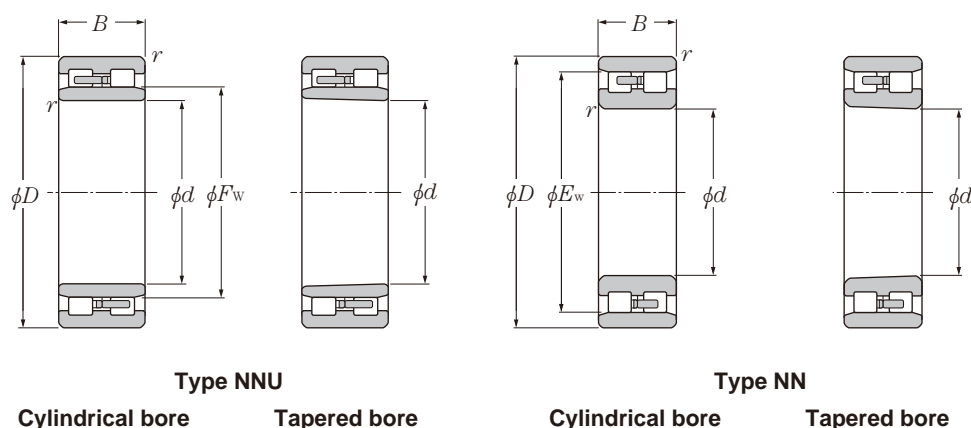
● Double Row Cylindrical Roller Bearings



Dynamic equivalent radial load
 $P_r = F_r$
 Static equivalent radial load
 $P_{0r} = F_r$

numbers	Dimensions				Abutment and fillet dimensions							Mass (approx.)			
	type NN		mm		mm		mm		mm		r_{as}	type NNU		type NN	
	cylindrical bore	tapered ¹⁾ bore	F_w	E_w	d_a min	d_b min	d_c max	d_d min	D_a max	D_b max		D_b min	cylindrical bore	tapered bore	cylindrical bore
NN4924 NN3024	NN4924K NN3024K	134.5 —	154.5 165	126.5 129	130 133	133 —	137 —	158.5 —	158.5 171	156.5 167	1 2	2.75 —	2.63 —	2.63 3.98	2.51 3.83
NN4926 NN3026	NN4926K NN3026K	146 —	168 182	138 139	142 143	144 —	148 —	172 —	172 191	170 183	1.5 2	3.69 —	3.52 —	3.52 5.92	3.35 5.71
NN4928 NN3028	NN4928K NN3028K	156 —	178 192	148 149	152 153	154 —	158 —	182 —	182 201	180 194	1.5 2	3.94 —	3.76 —	3.76 6.44	3.58 6.21
NN4930 NN3030	NN4930K NN3030K	168.5 —	196.5 206	159 161	164 166	166 —	171 —	201 —	201 214	198.5 208	2 2	6.18 —	5.9 —	5.9 7.81	5.62 7.53
NN4932 NN3032	NN4932K NN3032K	178.5 —	206.5 219	169 171	174 176	176 —	182 —	211 —	211 229	208.5 221	2 2	6.53 —	6.23 —	6.24 8.92	5.94 8.59
NN4934 NN3034	NN4934K NN3034K	188.5 —	216.5 236	179 181	184 187	186 —	192 —	221 —	221 249	218.5 238	2 2	6.87 —	6.55 —	6.56 12.6	6.24 12.2
NN4936 NN3036	NN4936K NN3036K	202 —	234 255	189 191	195 197	199 —	205 —	241 —	241 269	236 257	2 2	9.9 —	9.46 —	9.45 16.6	9.01 16
NN4938 NN3038	NN4938K NN3038K	212 —	244 265	199 201	205 207	209 —	215 —	251 —	251 279	246 267	2 2	10.4 —	9.94 —	9.93 18	9.47 17.4
NN4940 NN3040	NN4940K NN3040K	225 —	261 282	211 211	218 218	222 —	228 —	269 —	269 299	264 285	2 2	14.7 —	14 —	14 21.6	13.3 20.8
NN4944 NN3044	NN4944K NN3044K	245 —	281 310	231 233	238 240	242 —	248 —	289 —	289 327	284 313	2 2.5	15.9 —	15.2 —	15.2 29.3	14.5 28.2
NN4948 NN3048	NN4948K NN3048K	265 —	301 330	251 253	258 261	262 —	269 —	309 —	309 347	304 333	2 2.5	17.2 —	16.4 —	16.4 32.8	15.6 31.6
NN4952 NN3052	NN4952K NN3052K	292 —	336 364	271 276	279 285	288 —	296 —	349 —	349 384	339 367	2 3	29.6 —	28.3 —	28.3 47.4	27 45.8
NN4956 NN3056	NN4956K NN3056K	312 —	356 384	291 296	299 305	308 —	316 —	369 —	369 404	359 387	2 3	31.6 —	30.2 —	30.2 51.1	28.8 49.3

● Double Row Cylindrical Roller Bearings

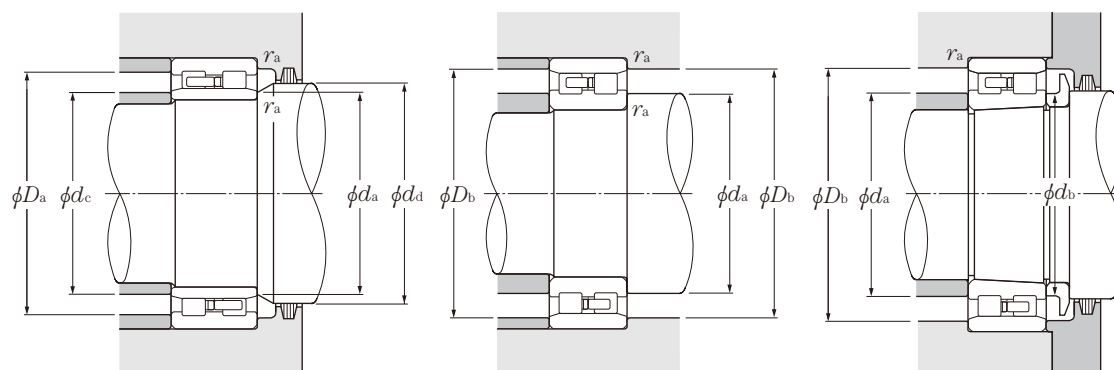


d 300 ~ 500mm

d	Boundary dimensions			Basic load ratings				Limiting speeds		Bearing	
	D	B	$r_{s\ min}^{2)}$	dynamic kN	static kN	dynamic kgf	static kgf	grease	oil	type NNU cylindrical bore	tapered ¹⁾ bore
300	420	118	3	1 200	2 800	122 000	285 000	1 300	1 500	NNU4960	NNU4960K
	460	118	4	1 330	2 560	135 000	261 000	1 200	1 500	—	—
320	440	118	3	1 240	2 970	126 000	305 000	1 200	1 400	NNU4964	NNU4964K
	480	121	4	1 350	2 670	138 000	272 000	1 100	1 300	—	—
340	460	118	3	1 270	3 150	130 000	320 000	1 100	1 300	NNU4968	NNU4968K
	520	133	5	1 620	3 200	165 000	325 000	1 100	1 300	—	—
360	480	118	3	1 270	3 250	130 000	330 000	1 100	1 300	NNU4972	NNU4972K
	540	134	5	1 650	3 300	169 000	340 000	1 000	1 200	—	—
380	520	140	4	1 630	4 050	167 000	415 000	1 000	1 200	NNU4976	NNU4976K
	560	135	5	1 690	3 450	172 000	355 000	940	1 100	—	—
400	540	140	4	1 690	4 300	172 000	435 000	940	1 100	NNU4980	NNU4980K
	600	148	5	2 040	4 150	208 000	420 000	880	1 000	—	—
420	560	140	4	1 740	4 500	177 000	460 000	900	1 100	NNU4984	NNU4984K
	620	150	5	2 080	4 300	212 000	440 000	840	990	—	—
440	600	160	4	2 150	5 550	219 000	565 000	850	1 000	NNU4988	NNU4988K
	650	157	6	2 420	5 100	247 000	520 000	800	940	—	—
460	620	160	4	2 220	5 850	226 000	595 000	800	950	NNU4992	NNU4992K
	680	163	6	2 550	5 350	260 000	545 000	750	890	—	—
480	650	170	5	2 280	5 900	233 000	600 000	770	910	NNU4996	NNU4996K
500	670	170	5	2 360	6 200	240 000	635 000	730	860	NNU49/500	NNU49/500K

1) "K" indicates bearings have tapered bore with a taper ratio of 1: 12. 2) Smallest allowable dimension for chamfer dimension r .

● Double Row Cylindrical Roller Bearings



Dynamic equivalent radial load

$$P_r = F_r$$

Static equivalent radial load

$$P_{0r} = F_r$$

numbers		Dimensions		Abutment and fillet dimensions								Mass (approx.)			
				mm		mm		mm		mm		kg		kg	
type NN cylindrical bore	type NN tapered ¹⁾ bore	F_w	E_w	d_a min	d_b min	d_c max	d_d min	D_a max	D_b max	D_b min	r_{as} max	type NNU		type NN	
												cylindrical bore	tapered bore	cylindrical bore	tapered bore
NN4960	NN4960K	339	391	313	323	335	343	407	407	394	2.5	48.6	46.4	46.4	44.2
NN3060	NN3060K	—	418	316	326	—	—	—	444	421	3	—	—	70.8	68.6
NN4964	NN4964K	359	411	333	343	355	363	427	427	414	2.5	51.4	49.1	49	46.7
NN3064	NN3064K	—	438	336	346	—	—	—	464	441	3	—	—	76.2	73.5
—	—	379	—	353	363	375	383	447	—	—	2.5	54.2	51.7	—	—
NN3068	NN3068K	—	473	360	371	—	—	—	500	477	4	—	—	102	98.5
—	—	398	—	373	383	394	402	467	—	—	2.5	57	54.4	—	—
NN3072	NN3072K	—	493	380	391	—	—	—	520	497	4	—	—	107	103
—	—	425	—	396	408	420	430	504	—	—	3	84.5	80.6	—	—
NN3076	NN3076K	—	512	400	411	—	—	—	540	516	4	—	—	113	109
—	—	445	—	416	428	440	450	524	—	—	3	88.2	84.1	—	—
NN3080	NN3080K	—	547	420	432	—	—	—	580	551	4	—	—	146	141
—	—	465	—	436	448	460	470	544	—	—	3	92	87.7	—	—
NN3084	NN3084K	—	567	440	452	—	—	—	600	571	4	—	—	154	148
—	—	492	—	456	469	487	497	584	—	—	3	127	121	—	—
NN3088	NN3088K	—	596	464	477	—	—	—	626	601	5	—	—	178	172
—	—	512	—	476	489	507	517	604	—	—	3	132	126	—	—
NN3092	NN3092K	—	622	484	498	—	—	—	656	627	5	—	—	202	195
—	—	534	—	500	514	531	541	630	—	—	4	156	149	—	—
—	—	556	—	520	534	551	561	650	—	—	4	162	155	—	—