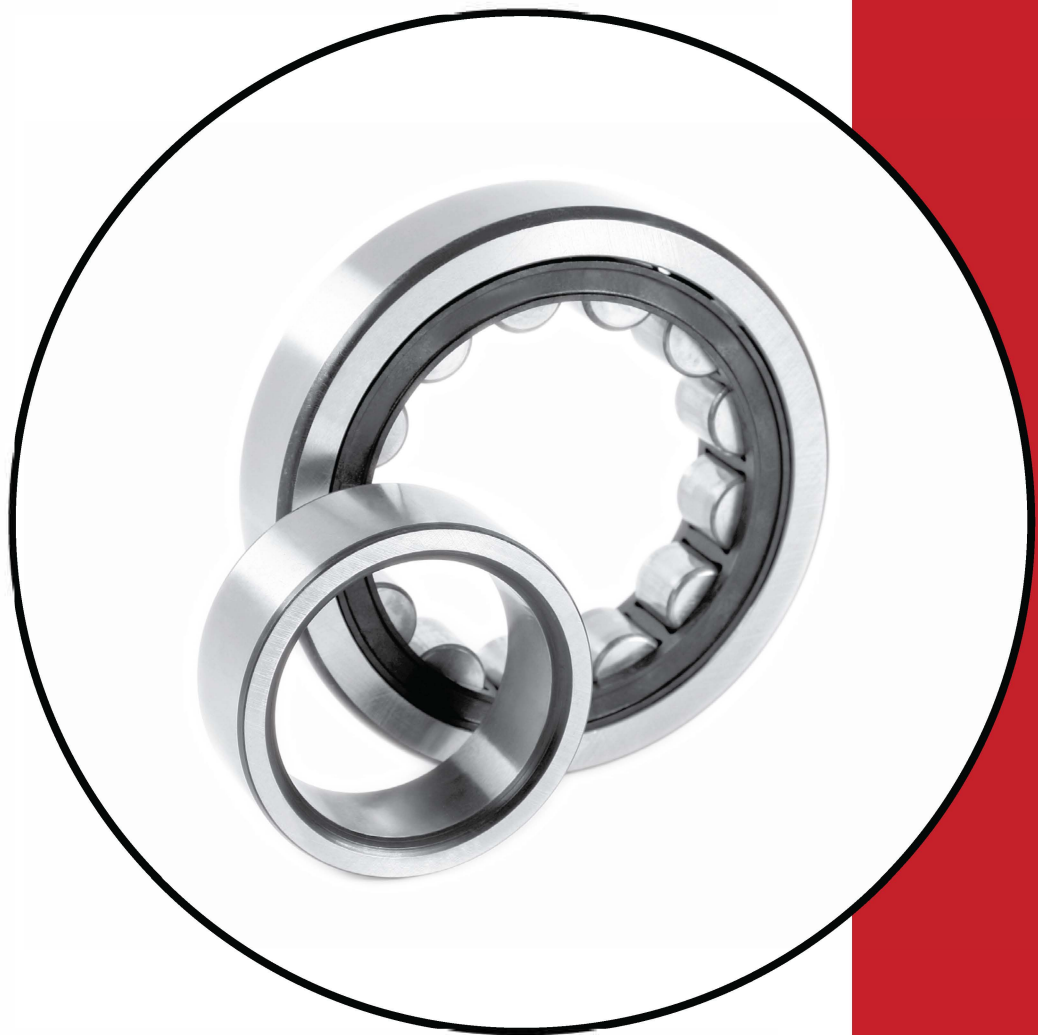


**NIRB**  

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**INDUSTRIAL**

# CYLINDRICAL ROLLER BEARINGS



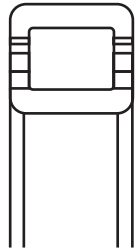
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**MOVING THE WHEELS OF INDUSTRY**

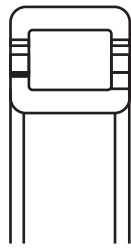
# CYLINDRICAL ROLLER BEARINGS – DESIGN & FEATURES

Single row cylindrical roller bearings are units with solid inner ring, outer ring, cylindrical roller and / or cage assemblies. Inner ring and outer rings are designed with one side rigid rib, both sides rigid ribs or no rigid ribs. The cage prevents rollers to rub each other during rolling. Cage type cylindrical roller bearings are very rigid, support high load on high speed compared to full compliment bearing. Bearings with suffix E have higher load carrying capacity.

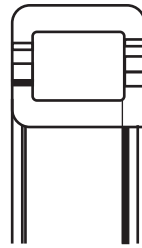
Cylindrical roller bearings are classified into following types depending on position of ribs.



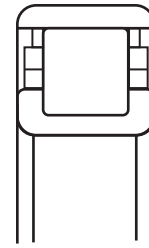
**NU-TYPE**



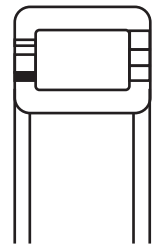
**NJ-TYPE**



**NUP-TYPE**



**N-TYPE**



**NF-TYPE**

**Non locating Bearings:** NU and N type cylindrical roller bearings are non locating bearings and can support only radial load.

**Semi locating Bearings:** NJ and NF type cylindrical roller bearings are semi locating bearing and they can support one direction axial load along with high radial load. Opposite direction they act as non locating bearing.

**Locating Bearings:** NUP and NH (NJ with HJ ring) type cylindrical roller bearings are locating bearings and support axial load in both the direction along with high radial load.

**Races and Rollers:** Inner, outer races and rollers are manufactured of high quality bearing steel (SAE 52100) for optimum performance.

**Cages:** Depending on application polyamide, steel and brass cages are used. Glass fiber filled polyamide cages are used in the bearings with EG15 and ECP suffix. No suffix used in usual bearing with steel cage. Suffix M or EM are used for the bearings where brass cages are used. For the bearings with polyamide cage, maximum working temperature is 120°C.

Other cage design will be made available on agreement.

**Lubrication:** They can be lubricated using grease or oil.

**Permissible Misalignment:**

Series... 10, 2 & 3 - 0.0012 radian (4')

22 & 23 – 0.0006 radian (2')

**Equivalent Load:**

**a. Dynamic Equivalent Load:**

$$P = XFr + YFa$$

Series	e	Single Row			
		Fa/Fr ≤ e		Fa/Fr ≥ e	
		X	Y	X	Y
NJ2, NUP2, NJ3, NUP3	0.2	1	0	0.92	0.6
NJ22, NUP22, NJ23, NUP23	0.3	1	0	0.92	0.4

**b. Static Equivalent Load:**

$$P_o = X_o Fr + Y_o Fa$$

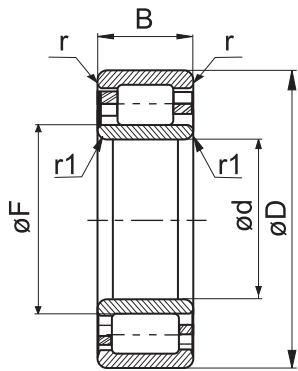
Single Row	
X <sub>o</sub>	Y <sub>o</sub>
1	0

**Accuracy:** The dimensional and geometrical tolerances are according to ISO492.

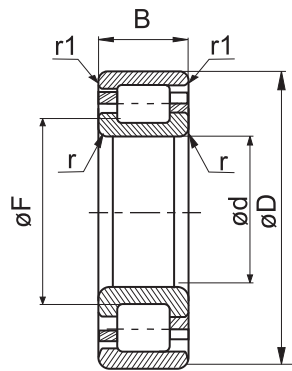
**Radial internal Clearance:** Cylindrical Roller bearings are supplied with Radial internal clearance accordance with ISO 5753-1.

Special radial internal clearance will be made available on agreement.

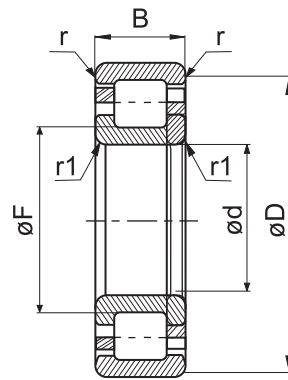
# CYLINDRICAL ROLLER BEARINGS – DESIGN & FEATURES



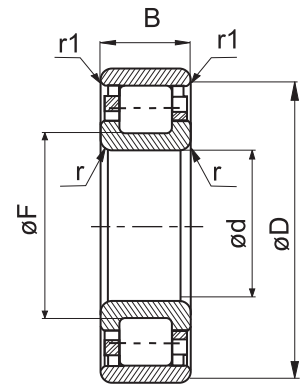
**NU-TYPE**



**NF-TYPE**



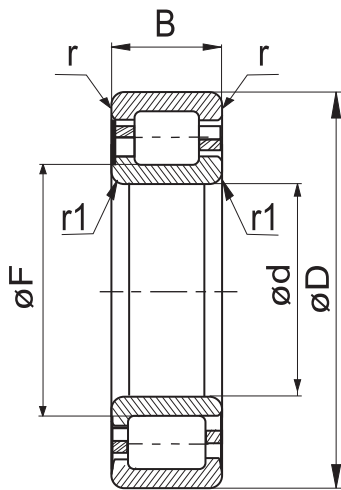
**NUP-TYPE**



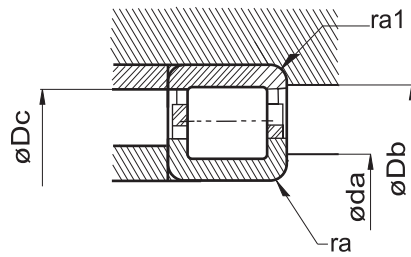
**N-TYPE**

Designation			d	D	B	r Min	r1 Min	F	BASIC LOAD RATING	
									DYNAMIC Cr(N)	STATIC C or (N)
NU203EG15	---	---	17	40	12	0.6	0.3	22.1	18000	15000
N203EG15	---	---	17	40	12	0.6	0.3	22.1	18000	15000
NU2203EG15	---	---	17	40	16	0.6	0.3	22.1	24500	22400
NU303EG15	NJ303EG15	NUP303EG15	17	47	14	1	0.6	24.2	25800	21600
N303EG15	NF303EG15	---	17	47	14	1	0.6	24.2	25800	21600
NU204EM	NJ204M	---	20	47	14	1	0.6	26.5	28000	25300
N204EM	---	---	20	47	14	1	0.6	26.5	28000	25300
NU2204EG15	NJ2204EG15	NUP2204EG15	20	47	18	1	0.6	26.5	33000	31500
NU304EG15	NJ304EG15	NUP304EG15	20	52	15	1.1	0.6	27.5	32000	27500
N304EG15	---	---	20	52	15	1.1	0.6	27.5	32000	27500
NU2304EM	NJ2304EM	---	20	52	21	1.1	0.6	27.5	42400	39400
NU1005M	---	---	25	47	12	0.6	0.3	30.5	13800	12500
NU205EG15	NJ205EG15	NUP205EG15	25	52	15	1	0.6	31.5	30000	28400
N205EG15	NF205EG15	---	25	52	15	1	0.6	31.5	30000	28400
NU2205EG15	NJ2205EG15	NUP2205EG15	25	52	18	1	0.6	31.5	37500	38000
NU305EM	NJ305EM	NUP305EM	25	62	17	1.1	1.1	34	42000	37000
N305EM	NF305EM	---	25	62	17	1.1	1.1	34	42000	37000
NU2305EM	NJ2305EM	NUP2305EM	25	62	24	1.1	1.1	34	57500	56800
NU1006M	---	---	30	55	13	1	0.6	36.6	17200	16500
NU206EG15	NJ206EG15	NUP206EG15	30	62	16	1	0.6	37.5	42000	41000
N206EG15	NF206EG15	---	30	62	16	1	0.6	37.5	42000	41000
NU2206EG15	NJ2206EG15	NUP2206EG15	30	62	20	1	0.6	37.5	52400	54500
NU306EG15	NJ306EG15	NUP306EG15	30	72	19	1.1	1.1	40.5	54000	51000
N306EG15	NF306EG15	---	30	72	19	1.1	1.1	40.5	54000	51000
NU2306EM	NJ2306EM	NUP2306EM	30	72	27	1.1	1.1	40.5	75300	78500
NU1007M	---	---	35	62	14	1	0.6	42	36300	38900
NU207EG15	NJ207EG15	NUP207EG15	35	72	17	1.1	0.6	44	51000	51200
N207EG15	NF207EG15	---	35	72	17	1.1	0.6	44	51000	51200
NU2207EG15	NJ2207EG15	NUP2207EG15	35	72	23	1.1	0.6	44	65700	71000
NU307EG15	NJ307EG15	NUP307EG15	35	80	21	1.5	1.1	46.2	67300	66400
N307EG15	NF307EG15	---	35	80	21	1.5	1.1	46.2	67300	66400
NU2307EM	NJ2307EM	NJ2307EM	35	80	31	1.5	1.1	46.2	93800	106000

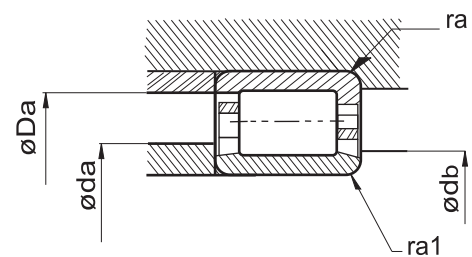
# CYLINDRICAL ROLLER BEARINGS – DESIGN & FEATURES



**NJ-TYPE**



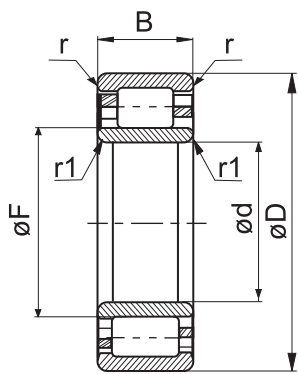
**N-TYPE**



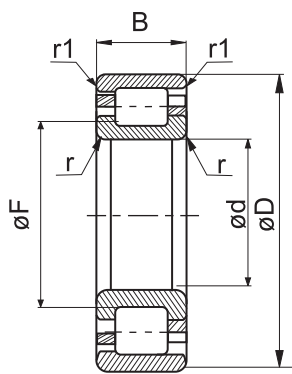
**NU-TYPE**

Mass (Kg)	Limiting Speed		da		db	Da	Db	Dc	ra Min	ra1 Min
	Grease	Oil	min	max						
0.07	15000	18000	21	21.5	23	36	-	-	0.6	0.3
0.07	15000	18000	21	-	-	36	36	34	0.6	0.3
-	15000	18000	21	21.5	23	36	-	-	0.6	0.3
0.12	13000	16000	21.2	23.5	25	42.8	-	-	1	0.6
0.12	13000	16000	21.2	-	-	42.8	43	41	1	0.6
0.12	13000	16000	24	26	29	41	-	-	1	0.6
0.12	15000	18000	24	-	-	41	43	40	1	0.6
0.15	13000	16000	24	26	29	41	-	-	1	0.6
0.15	12000	15000	24	27	30	45	-	-	1	0.6
0.15	12000	15000	24	-	-	45	48	46	1	0.6
0.22	11000	14000	24	27	30	45	-	-	1	0.6
0.09	15000	18000	27	30	32	44	-	-	0.6	0.3
0.14	12000	14000	29	31	34	46	-	-	1	0.6
0.14	13000	16000	29	-	-	46	48	45	1	0.6
0.17	12000	14000	29	31	34	46	-	-	1	0.6
0.26	10000	12000	32	33	37	55	-	-	1	1
0.26	1000	13000	32	-	-	55	55	53	1	1
0.36	9000	11000	32	33	37	55	-	-	1	1
0.13	12000	15000	33	35	38	50	-	-	1	0.6
0.21	9500	12000	34	37	40	56	-	-	1	0.6
0.21	11000	13000	34	-	-	56	57	54	1	0.6
0.26	9500	12000	34	37	40	56	-	-	1	0.6
0.37	8500	10000	37	40	44	65	-	-	1	1
0.37	8500	11000	37	-	-	65	64	61	1	1
0.54	8000	9500	37	40	44	65	-	-	1	1
0.18	11000	13000	38	41	44	57	-	-	1	0.6
0.30	8500	10000	39	43	46	65	-	-	1	0.6
0.30	9500	11000	39	-	-	65	65	63	1	0.6
0.41	8500	10000	39	43	46	65	-	-	1	0.6
0.49	8000	9500	42	45	48	71	-	-	1.5	1
0.50	8000	9500	42	-	-	71	71	69	1.5	1
0.75	6700	8500	42	45	48	71	-	-	1.5	1

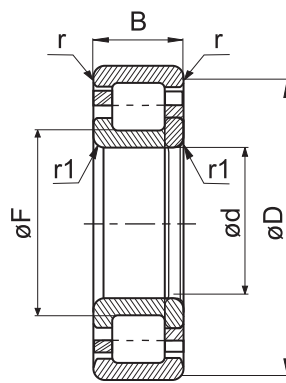
# CYLINDRICAL ROLLER BEARINGS – DESIGN & FEATURES



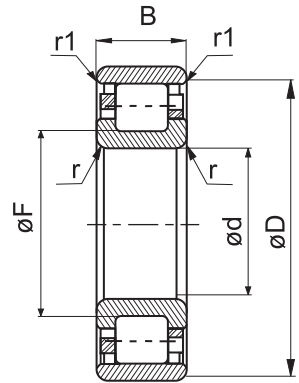
**NU-TYPE**



**NF-TYPE**



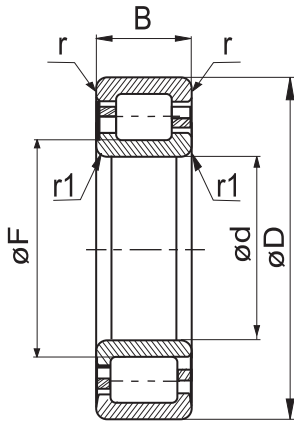
**NUP-TYPE**



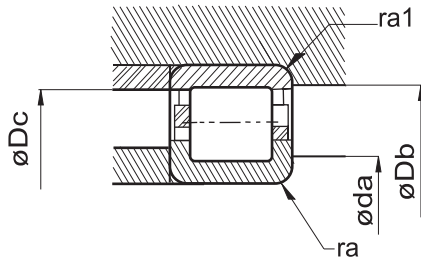
**N-TYPE**

Designation		d	D	B	r Min	r1 Min	F	BASIC LOAD RATING		
								DYNAMIC Cr(N)	STATIC C or (N)	
NU1008M	—	—	40	68	15	1	0.6	47	25600	26600
NU208EG15	NJ208EG15	NUP208EG15	40	80	18	1.1	1.1	49.5	56500	56500
N208EG15	NF208EG15	---	40	80	18	1.1	1.1	49.5	56500	56500
NU2208EG15	NJ2208EG15	NUP2208EG15	40	80	23	1.1	1.1	49.5	77000	84300
NU308EM	NJ308EM	NUP308EM	40	90	23	1.5	1.5	52	84000	82700
N308EM	NF308EM	---	40	90	23	1.5	1.5	52	84000	82700
NU2308EM	NJ2308EM	NUP2308EM	40	90	33	1.5	1.5	52	115000	123500
NU1009M	—	—	45	75	16	1	0.6	52.5	45700	52300
NU209EG15	NJ209EG15	NUP209EG15	45	85	19	1.1	1.1	54.5	60700	63100
N209EG15	NF209EG15	---	45	85	19	1.1	1.1	54.5	60700	63100
NU2209EG15	NJ2209EG15	NUP2209EG15	45	85	23	1.1	1.1	54.5	80700	91500
NU309EM	NJ309EM	NUP309EM	45	100	25	1.5	1.5	58.5	101700	103800
N309EM	NF309EM	---	45	100	25	1.5	1.5	58.5	101700	103800
NU2309EM	NJ2309EM	NUP2309EM	45	100	36	1.5	1.5	58.5	141000	1584000
NU1010M	---	---	50	80	16	1	0.6	57.5	43500	51100
NU210EG15	NJ210EG15	NUP210EG15	50	90	20	1.1	1.1	59.5	70100	77800
N210EG15	NF210EG15	---	50	90	20	1.1	1.1	59.5	70100	77800
NU2210EG15	NJ2210EG15	NUP2210EG15	50	90	23	1.1	1.1	59.5	80500	92800
NU310	NJ310	NUP310	50	110	27	2	2	65	114500	119000
N310	NF310	---	50	110	27	2	2	65	114500	119000
NU2310EM	NJ2310EM	NUP2310EM	50	110	40	2	2	65	166000	192400
NU1011M	---	---	55	90	18	1.1	1	64	58000	70900
NU211	NJ211EG15	NUP211EG15	55	100	21	1.5	1.1	66	87200	100000
N211EG15	NF211EG15	---	55	100	21	1.5	1.1	66	87200	100000
NU2211EM	NJ2211EM	NUP2211EM	55	100	25	1.5	1.1	66	102000	123000
NU311EM	NJ311EM	NUP311EM	55	120	29	2	2	70.5	142000	148000
N311EM	NF311EM	---	55	120	29	2	2	70.5	142000	148000
NU2311EM	NJ2311EM	NUP2311EM	55	120	43	2	2	70.5	204000	238000
NU1012M	---	---	60	95	18	1.1	1	69.5	38000	45500
NU212	NJ212	NUP212	60	110	22	1.5	1.5	72	98600	109000
N212	NF212	---	60	110	22	1.5	1.5	72	98600	109000
NU2212EM	NJ2212EM	NUP2212EM	60	110	28	1.5	1.5	72	132000	158400
NU312EM	NJ312EM	NUP312EM	60	130	31	2.1	2.1	77	157000	167000
N312EM	NF312EM	---	60	130	31	2.1	2.1	77	157000	167000
NU2312EM	NJ2312EM	NUP2312EM	60	130	46	2.1	2.1	77	228000	270000

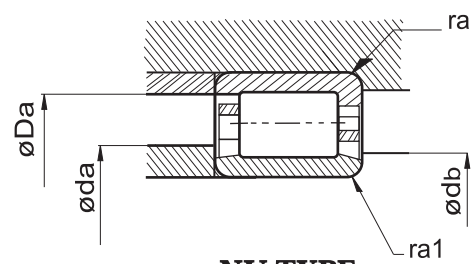
# CYLINDRICAL ROLLER BEARINGS – DESIGN & FEATURES



**NJ-TYPE**



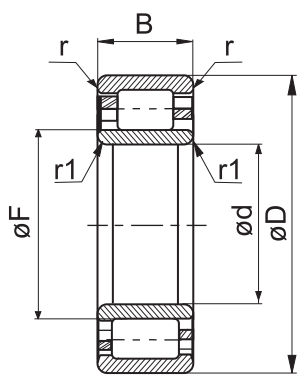
**N-TYPE**



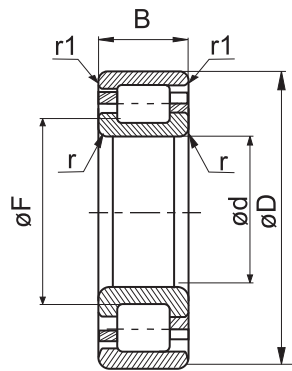
**NU-TYPE**

Mass (Kg)	Limiting Speed		da		db	Da	Db	Dc	ra Min	ra1 Min
	Grease	Oil	min	max						
0.22	10000	12000	43	46	49	63	-	-	1	0.6
0.38	7500	9000	47	49	52	73	-	-	1	1
0.36	8500	10000	47	-	-	73	73	70	1	1
0.49	7500	9000	47	49	52	73	-	-	1	1
0.67	6700	8000	49	51	55	81	-	-	1.5	1.5
0.67	6700	8500	49	-	-	81	81	79	1.5	1.5
0.97	6000	7500	49	51	55	81	-	-	1.5	1.5
0.28	9000	11000	48	52	54	70	-	-	1	0.6
0.43	6700	8000	52	54	57	78	-	-	1	1
0.43	7500	9000	52	-	-	78	78	75	1	1
0.53	6700	8500	52	54	57	78	-	-	1	1
0.91	6000	7500	54	57	60	91	-	-	1.5	1.5
0.91	6300	7500	54	-	-	91	90	87	1.5	1.5
1.32	5300	6700	54	57	60	91	-	-	1.5	1.5
0.31	8000	10000	53	57	59	75	-	-	1	0.6
0.49	6300	7500	57	58	62	83	-	-	1	1
0.49	7100	8500	57	-	-	83	83	80	1	1
0.57	6300	8000	57	58	62	83	-	-	1	1
1.18	5000	6000	61	63	67	99	-	-	2	2
1.18	5600	6700	61	-	-	99	98	96	2	2
1.95	5000	6300	61	63	67	99	-	-	2	2
0.45	7500	9000	60	63	65	84	-	-	1	1
0.67	5600	7100	62	65	68	91	-	-	1.5	1
0.67	6300	7500	62	-	-	91	91	89	1.5	1
0.82	5600	7100	62	65	68	91	-	-	1.5	1
1.50	4500	5600	66	69	72	109	-	-	2	2
1.50	5000	6300	66	-	-	109	108	105	2	2
2.25	4500	5600	66	69	72	109	-	-	2	2
0.48	6700	8500	65	68	71	89	-	-	1	1
0.83	5300	6300	69	71	75	101	-	-	1.5	1.5
0.83	6000	7100	69	-	-	101	101	99	1.5	1.5
1.10	5300	6300	69	71	75	101	-	-	1.5	1.5
1.87	4800	5600	72	75	79	118	-	-	2	2
1.87	4800	5600	72	-	-	118	116	114	2	2
2.80	4300	5300	72	75	79	118	-	-	2	2

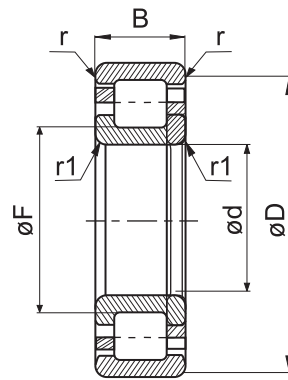
# CYLINDRICAL ROLLER BEARINGS – DESIGN & FEATURES



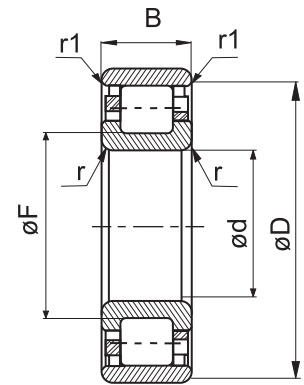
**NU-TYPE**



**NF-TYPE**



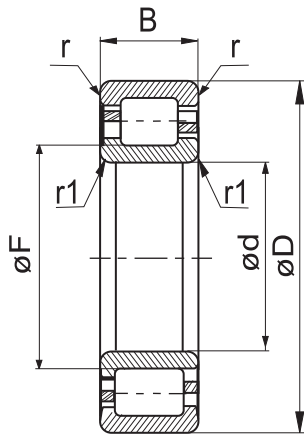
**NUP-TYPE**



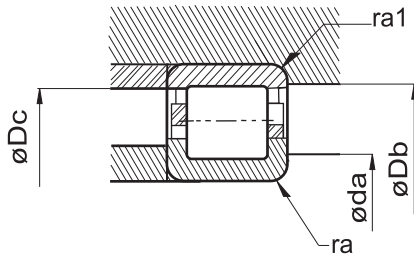
**N-TYPE**

Designation	d	D	B	r Min	r1 Min	F	BASIC LOAD RATING			
							DYNAMIC Cr(N)	STATIC C or (N)		
NU1013M	—	—	65	100	18	1.1	1	74.5	63600	82800
NU213EM	NJ213EM	NUP213EM	65	120	23	1.5	1.5	78.5	112000	125900
N213EM	NF213EM	---	65	120	23	1.5	1.5	78.5	112000	125900
NU2213EM	NJ2213EM	NUP2213EM	65	120	31	1.5	1.5	78.5	153000	188000
NU313EM	NJ313EM	NUP313EM	65	140	33	2.1	2.1	82.5	189000	202900
N313EM	NF313EM	---	65	140	33	2.1	2.1	82.5	189000	202900
NU2313EM	NJ2313EM	NUP2313EM	65	140	48	2.1	2.1	82.5	254000	297000
NU1014M	---	---	70	110	20	1.1	1	80	80200	100000
NU214EM	NJ214EM	NUP214EM	70	125	24	1.5	1.5	83.5	123000	144500
N214EM	NF214EM	---	70	125	24	1.5	1.5	83.5	123000	144500
NU2214EM	NJ2214EM	NUP2214EM	70	125	31	1.5	1.5	83.5	160000	201600
NU314EM	NJ314EM	NUP314EM	70	150	35	2.1	2.1	89	213000	234000
N314	NF314	---	70	150	35	2.1	2.1	89	213000	234000
NU2314EM	NJ2314EM	NUP2314EM	70	150	51	2.1	2.1	89	280000	333000
NU1015M	—	—	75	115	20	1.1	1	85	59200	72400
NU215EM	NJ215EM	NUP215EM	75	130	25	1.5	1.5	88.5	135000	164500
N215EM	NF215EM	---	75	130	25	1.5	1.5	88.5	135000	164500
NU2215EM	NJ2215EM	NUP2215EM	75	130	31	1.5	1.5	88.5	166000	215000
NU315EM	NJ315EM	NUP315EM	75	160	37	2.1	2.1	95	249000	276000
N315EM	NF315EM	---	75	160	37	2.1	2.1	95	249000	276000
NU2315EM	NJ2315EM	NUP2315EM	75	160	55	2.1	2.1	95	336000	405500
NU1016M	---	---	80	125	22	1.1	1	91.5	103600	135000
NU216EM	NJ216EM	NUP216EM	80	140	26	2	2	95.3	144000	175700
N216EM	NF216EM	---	80	140	26	2	2	95.3	144000	175700
NU2216EM	NJ2216EM	NUP2216EM	80	140	33	2	2	95.3	191000	251700
NU316EM	NJ316EM	NUP316EM	80	170	39	2.1	2.1	101	269000	300000
N316EM	NF316EM	---	80	170	39	2.1	2.1	101	269000	300000
NU2316EM	NJ2316EM	NUP2316EM	80	170	58	2.1	2.1	101	366000	447000
NU1017M	---	---	85	130	22	1.1	1	96.5	64500	85500
NU217EM	NJ217EM	NUP217EM	85	150	28	2	2	100.5	173000	208000
N217EM	NF217EM	---	85	150	28	2	2	100.5	173000	208000
NU2217EM	NJ2217EM	NUP2217EM	85	150	36	2	2	100.5	223000	287000
NU317EM	NJ317EM	NUP317EM	85	180	41	3	3	108	305000	351000
N317EM	NF317EM	---	85	180	41	3	3	108	305000	351000

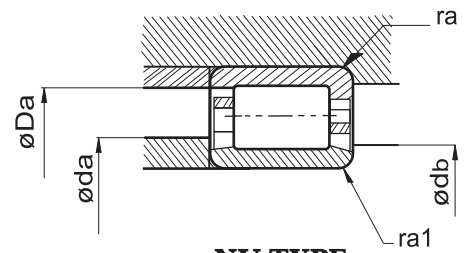
# CYLINDRICAL ROLLER BEARINGS – DESIGN & FEATURES



**NJ-TYPE**



**N-TYPE**

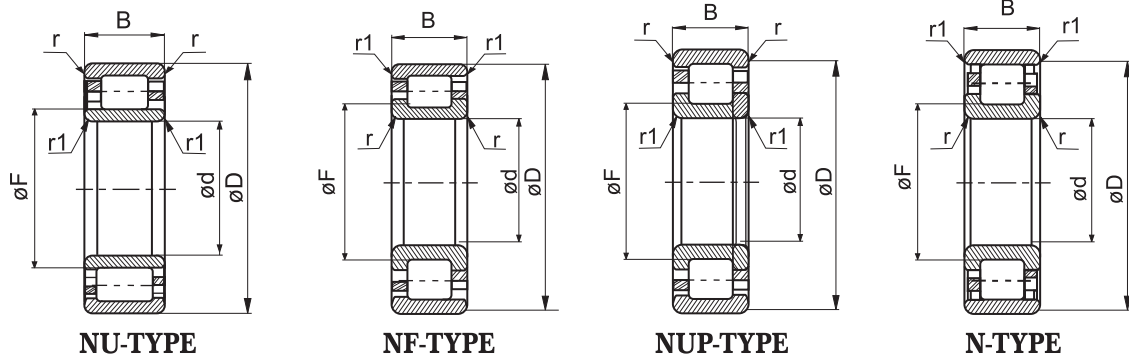


**NU-TYPE**

Mass (Kg)	Limiting Speed		da		db	Da	Db	Dc	ra Min	ra1 Min
	Grease	Oil	min	max						
0.51	6300	8000	70	73	76	94	-	-	1	1
1.06	4800	5600	74	77	81	111	-	-	1.5	1.5
1.07	5300	6300	74	-	-	111	110	107	1.5	1.5
1.45	4800	6000	74	77	81	111	-	-	1.5	1.5
2.30	4300	5300	77	81	85	128	-	-	2	2
2.30	4300	5300	77	-	-	128	126	123	2	2
3.36	3800	4800	77	81	85	128	-	-	2	2
0.71	6000	7100	75	78	82	104	-	-	1	1
1.18	5000	6300	79	82	86	116	-	-	1.5	1.5
1.85	5000	6300	79	-	-	116	115	112	1.5	1.5
1.45	4500	5600	79	82	86	116	-	-	1.5	1.5
2.85	4000	5000	82	87	92	138	-	-	2	2
2.85	4000	5000	82	-	-	138	135	131	2	2
4.10	3600	4500	82	87	92	138	-	-	2	2
0.74	5600	6700	80	83	87	109	-	-	1	1
1.32	4800	6000	84	87	90	121	-	-	1.5	1.5
1.34	4800	6000	84	-	-	121	120	117	1.5	1.5
1.67	4300	5300	84	87	90	121	-	-	1.5	1.5
3.40	3800	4800	87	93	97	148	-	-	2	2
3.40	3800	4800	87	-	-	148	145	141	2	2
5.00	3400	4300	87	93	97	148	-	-	2	2
0.99	5300	6300	85	90	94	119	-	-	1	1
1.95	4500	5300	91	94	97	129	-	-	2	2
1.95	4500	5300	91	-	-	129	129	126	2	2
2.11	4000	5000	91	94	97	129	-	-	2	2
4.00	3600	4300	92	99	105	158	-	-	2	2
4.22	3600	4300	92	-	-	158	153	149	2	2
5.90	3200	4000	92	99	105	158	-	-	2	2
1.04	5000	6000	90	95	99	124	-	-	1	1
1.99	4300	5000	96	99	104	139	-	-	2	2
1.99	4300	5000	96	-	-	139	138	135	2	2
2.60	3800	4500	96	99	104	139	-	-	2	2
4.70	3400	4000	99	106	110	166	-	-	2.5	2.5
5.40	3400	4000	99	-	-	166	162	158	2.5	2.5

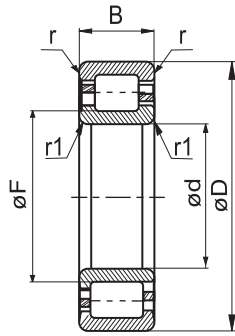


# CYLINDRICAL ROLLER BEARINGS – DESIGN & FEATURES

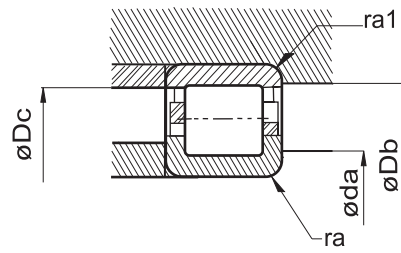


Designation			d	D	B	r Min	r1 Min	F	BASIC LOAD RATING	
									DYNAMIC Cr(N)	STATIC C or (N)
NU1018M	---	---	90	140	24	1.5	1.1	103	85800	111000
NU218EM	NJ218EM	NUP218EM	90	160	30	2	2	107	191000	232000
N218EM	NF218EM	---	90	160	30	2	2	107	191000	232000
NU2218EM	NJ2218EM	NUP2218EM	90	160	40	2	2	107	250000	328000
NU318EM	NJ318EM	NUP318EM	90	190	43	3	3	113.5	330000	375000
N318EM	NF318EM	---	90	190	43	3	3	113.5	330000	375000
NU1019M	---	---	95	145	24	1.5	1.1	108	89000	117000
NU219EM	NJ219EM	NUP219EM	95	170	32	2.1	2.1	112.5	231000	280000
N219EM	NF219EM	---	95	170	32	2.1	2.1	112.5	231000	280000
NU2219EM	NJ2219EM	NUP2219EM	95	170	43	2.1	2.1	112.5	296000	386000
NU319EM	NJ319EM	NUP319EM	95	200	45	3	3	121.5	350000	409000
N319EM	NF319EM	---	95	200	45	3	3	121.5	350000	409000
NU1020M	---	---	100	150	24	1.5	1.1	113	92000	123000
NU220EM	NJ220EM	NUP220EM	100	180	34	2.1	2.1	119	260000	322000
N220EM	NF220EM	---	100	180	34	2.1	2.1	119	260000	322000
NU2220EM	NJ2220EM	NUP2220EM	100	180	46	2.1	2.1	119	344000	461000
NU320EM	NJ320EM	NUP320EM	100	215	47	3	3	127.5	401000	456000
N320EM	NF320EM	---	100	215	47	3	3	127.5	401000	456000
N1021M	---	---	105	160	26	2	1.1	119.5	107000	145000
NU221EM	NJ221EM	NUP221EM	105	190	36	2.1	2.1	125.5	273000	329000
N221EM	NF221EM	---	105	190	36	2.1	2.1	125.5	273000	329000
NU1022M	---	---	110	170	28	2	1.1	125	133000	176000
NU222EM	NJ222EM	NUP222EM	110	200	38	2.1	2.1	132.5	303000	383000
N222EM	NF222EM	---	110	200	38	2.1	2.1	132.5	303000	383000
NU2222EM	NJ2222EM	NUP2222EM	110	200	53	2.1	2.1	132.5	392000	532000
NU322EM	NJ322EM	NUP322EM	110	240	50	3	3	143	476000	561000
N322EM	NF322EM	---	110	240	50	3	3	143	476000	561000
NU1024M	---	---	120	180	28	2	1.1	135	140000	194000
NU224EM	NJ224EM	NUP224EM	120	215	40	2.1	2.1	143.5	351000	448000
N224EM	NF224EM	---	120	215	40	2.1	2.1	143.5	351000	448000
NU2224EM	NJ2224EM	NUP2224EM	120	215	58	2.1	2.1	143.5	464000	642000
NU1026M	---	---	130	200	33	2	1.1	148	172000	239000
NU226EM	NJ226EM	NUP226EM	130	230	40	3	3	153.5	380000	481000
N226EM	NF226EM	---	130	230	40	3	3	153.5	380000	481000
NU1028M	---	---	140	210	33	2	1.1	158	184000	262000
NU228EM	NJ228EM	NUP228EM	140	250	42	3	3	169	411000	546000
N228EM	NF228EM	---	140	250	42	3	3	169	411000	546000
NU1030M	---	---	150	225	35	2.1	1.5	169.5	205000	310000

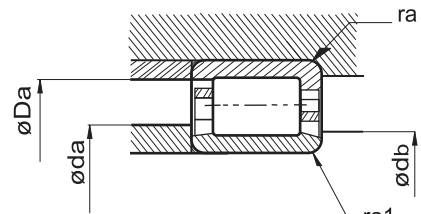
# CYLINDRICAL ROLLER BEARINGS – DESIGN & FEATURES



**NJ-TYPE**



**N-TYPE**



**NU-TYPE**

Mass (Kg)	Limiting Speed		da		db	Da	Db	Dc	ra Min	ra1 Min
	Grease	Oil	min	max						
1.31	4500	5600	96	101	106	133	-	-	1.5	1
2.46	4000	4800	101	105	109	149	-	-	2	2
2.47	4000	4800	101	-	-	149	147	143	2	2
3.22	3600	4300	101	105	109	149	-	-	2	2
5.39	3200	3800	104	111	117	176	-	-	2.5	2.5
6.19	3200	3800	104	-	-	176	171	168	2.5	2.5
1.41	4300	5300	101	106	111	138	-	-	1.5	1
3.10	3800	4500	107	111	116	158	-	-	2	2
3.10	3800	4500	107	-	-	158	156	153	2	2
4.10	3400	4000	107	111	116	158	-	-	2	2
6.52	3000	3600	109	119	124	186	-	-	2.5	2.5
7.25	3000	3600	109	-	-	186	179	176	2.5	2.5
1.46	4300	5300	106	111	116	143	-	-	1.5	1
3.69	3600	4300	112	117	122	168	-	-	2	2
3.70	3600	4300	112	-	-	168	165	161	2	2
4.97	3200	3800	112	117	122	168	-	-	2	2
8.67	2800	3400	114	125	132	201	-	-	2.5	2.5
8.75	2800	3400	114	-	-	201	193	190	2.5	2.5
1.84	4000	4800	111	118	122	151	-	-	2	1
4.08	3400	4000	117	123	128	178	-	-	2	2
4.63	3400	4000	117	-	-	178	173	170	2	2
2.31	3800	4500	116	124	128	161	-	-	2	1
4.64	3200	3800	122	130	135	188	-	-	2	2
5.37	3200	3800	122	-	-	188	182	179	2	2
7.65	2800	3400	122	130	135	188	-	-	2	2
11.80	2600	3000	124	140	145	226	-	-	2.5	2.5
11.80	2600	3000	124	-	-	226	213	209	2.5	2.5
2.47	3400	4300	126	134	138	171	-	-	2	1
6.43	3000	3400	132	141	146	203	-	-	2	2
6.43	3000	3400	132	-	-	203	197	194	2	2
9.51	2600	3200	132	141	146	203	-	-	2	2
3.81	3200	3800	136	146	151	191	-	-	2	1
6.50	2600	3200	144	151	158	216	-	-	2.5	2.5
8.03	2600	3200	144	-	-	216	212	207	2.5	2.5
3.94	3000	3600	146	156	161	201	-	-	2	1
9.31	2400	3000	154	171	171	236	-	-	2.5	2.5
9.30	2400	3000	154	-	-	236	227	223	2.5	2.5
4.93	2800	3400	158	167	173	215	-	-	2	1.5

# SINGLE ROW ANGULAR CONTACT BALL BEARING

## NOTES

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## **NRB INDUSTRIAL BEARINGS LTD**

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