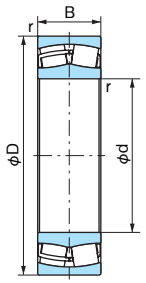
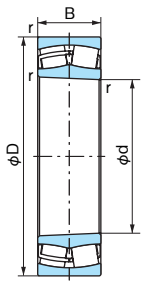
Spherical Roller Bearings

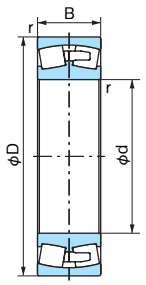
Bore Diameter: 55～75mm



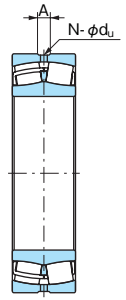
Cylindrical bore



Tapered bore

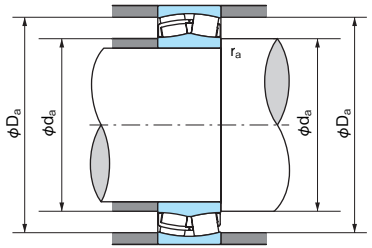


With machined brass cage



With oil holes / oil groove (W33)

1N=0.102kgf



■Dynamic equivalent radial load

Pr=XFr+YFa

$\frac{Fa}{Fr} \leqq e$		$\frac{Fa}{Fr} > e$	
X	Y	X	Y
1	Y_1	0.67	Y_2

Values of Y_1, Y_2 and e from table.

■Static equivalent radial load

$P_{or}=F_r+Y_0F_a$

Values Y_0 from table.

Boundary dimensions (mm)				Bearing No.		Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min-1)		Dimensions of lubrication holes and grooves			Abutment and fillet dimensions (mm)			Constant e	Axial load factor			Mass (kg) Cylindrical bore (Reference)	Bearing No.	
d	D	B	r (min)	Cylindrical bore	Tapered bore			Grease lubrication	Oil lubrication	Hole diameter du	Groove width A	Hole count N	da (min)	Da (max)	ra (max)		Y_1	Y_2	Y_0		Cylindrical bore	Tapered bore
55	100	25	1.5	**22211EX**	**22211EXK**	171000	144000	5,300	6,700	3	6	4	63.5	91.5	1.5	0.24	2.84	4.23	2.78	0.88	**22211EX**	**22211EXK**
	100	25	1.5	**22211AEX**	**22211AEXK**	150000	118000	6,750	8,550	3	6	4	63.5	91.5	1.5	0.29	2.34	3.48	2.28	0.89	**22211AEX**	**22211AEXK**
	120	29	2	**21311EX1**	**21311EX1K**	200000	165000	4,500	5,600	3	5	4	65.0	110.0	2.0	0.25	2.71	4.03	2.65	1.70	**21311EX1**	**21311EX1K**
	120	29	2	**21311AX**	**21311AXK**	206000	171000	6,000	7,500	3	5	4	65.0	110.0	2.0	0.29	2.32	3.45	2.27	1.77	**21311AX**	**21311AXK**
	120	43	2	**22311EX**	**22311EXK**	325000	263000	3,800	4,800	4	8	4	65.0	110.0	2.0	0.36	1.85	2.75	1.81	2.40	**22311EX**	**22311EXK**
	120	43	2	**22311AEX**	**22311AEXK**	294000	227000	6,000	7,650	4	8	4	65.0	110.0	2.0	0.43	1.56	2.33	1.53	2.39	**22311AEX**	**22311AEXK**
60	110	28	1.5	**22212EX**	**22212EXK**	210000	179000	4,800	6,000	3	6	4	68.5	101.5	1.5	0.25	2.74	4.08	2.68	1.20	**22212EX**	**22212EXK**
	110	28	1.5	**22212AEX**	**22212AEXK**	179000	144000	6,150	7,800	3	6	4	68.5	101.5	1.5	0.29	2.29	3.41	2.24	1.22	**22212AEX**	**22212AEXK**
	130	31	2.1	**21312EX1**	**21312EX1K**	238000	193000	3,800	4,800	3	5	4	72.0	118.0	2.0	0.24	2.78	4.14	2.72	2.10	**21312EX1**	**21312EX1K**
	130	31	2.1	**21312AX**	**21312AXK**	228000	192000	5,250	6,750	3	5	4	72.0	118.0	2.0	0.29	2.36	3.52	2.31	2.19	**21312AX**	**21312AXK**
	130	46	2.1	**22312EX**	**22312EXK**	390000	330000	3,600	4,500	4	8	4	72.0	118.0	2.0	0.36	1.86	2.77	1.82	3.05	**22312EX**	**22312EXK**
	130	46	2.1	**22312AEX**	**22312AEXK**	340000	275000	5,400	6,900	4	8	4	72.0	118.0	2.0	0.41	1.65	2.46	1.62	3.01	**22312AEX**	**22312AEXK**
65	120	31	1.5	**22213EX**	**22213EXK**	246000	209000	4,300	5,300	3	6	4	73.5	111.5	1.5	0.25	2.69	4.00	2.63	1.56	**22213EX**	**22213EXK**
	120	31	1.5	**22213AEX**	**22213AEXK**	213000	169000	5,700	7,200	3	6	4	73.5	111.5	1.5	0.30	2.26	3.36	2.21	1.60	**22213AEX**	**22213AEXK**
	140	33	2.1	**21313EX1**	**21313EX1K**	270000	232000	3,600	4,500	3	6	4	77.0	128.0	2.0	0.24	2.83	4.21	2.76	2.60	**21313EX1**	**21313EX1K**
	140	33	2.1	**21313AX**	**21313AXK**	261000	222000	5,100	6,400	3	6	4	77.0	128.0	2.0	0.28	2.40	3.57	2.35	2.69	**21313AX**	**21313AXK**
	140	48	2.1	**22313EX**	**22313EXK**	415000	355000	3,200	4,000	4	8	4	77.0	128.0	2.0	0.34	1.98	2.94	1.93	3.67	**22313EX**	**22313EXK**
	140	48	2.1	**22313AEX**	**22313AEXK**	380000	310000	4,950	6,450	4	8	4	77.0	128.0	2.0	0.39	1.72	2.55	1.68	3.64	**22313AEX**	**22313AEXK**
70	125	31	1.5	**22214EX**	**22214EXK**	257000	220000	4,000	5,300	3	6	4	78.5	116.5	1.5	0.24	2.87	4.27	2.80	1.65	**22214EX**	**22214EXK**
	125	31	1.5	**22214AEX**	**22214AEXK**	225000	185000	5,400	6,900	3	6	4	78.5	116.5	1.5	0.28	2.39	3.55	2.33	1.69	**22214AEX**	**22214AEXK**
	150	35	2.1	**21314EX1**	**21314EX1K**	310000	260000	3,200	4,000	3	6	4	82.0	138.0	2.0	0.24	2.84	4.23	2.78	3.10	**21314EX1**	**21314EX1K**
	150	35	2.1	**21314AX**	**21314AXK**	305000	268000	4,500	6,000	3	6	4	82.0	138.0	2.0	0.28	2.45	3.64	2.39	3.30	**21314AX**	**21314AXK**
	150	51	2.1	**22314EX**	**22314EXK**	480000	415000	3,000	3,800	5	10	4	82.0	138.0	2.0	0.34	1.98	2.94	1.93	4.45	**22314EX**	**22314EXK**
	150	51	2.1	**22314AEX**	**22314AEXK**	445000	365000	4,650	6,000	5	10	4	82.0	138.0	2.0	0.40	1.71	2.54	1.67	4.46	**22314AEX**	**22314AEXK**
75	130	31	1.5	**22215EX**	**22215EXK**	265000	234000	4,000	5,000	3	6	4	83.5	121.5	1.5	0.22	3.07	4.58	3.01	1.74	**22215EX**	**22215EXK**
	130	31	1.5	**22215AEX**	**22215AEXK**	234000	191000	5,100	6,600	3	6	4	83.5	121.5	1.5	0.27	2.51	3.73	2.46	1.76	**22215AEX**	**22215AEXK**
	160	37	2.1	**21315EX1**	**21315EX1K**	340000	298000	3,200	4,000	3	6	4	87.0	148.0	2.0	0.23	2.87	4.27	2.80	3.80	**21315EX1**	**21315EX1K**
	160	37	2.1	**21315AX**	**21315AXK**	325000	286000	4,350	5,550	3	6	4	87.0	148.0	2.0	0.27	2.50	3.72	2.44	3.95	**21315AX**	**21315AXK**
	160	55	2.1	**22315EX**	**22315EXK**	550000	475000	2,800	3,600	5	10	4	87.0	148.0	2.0	0.35	1.95	2.90	1.91	5.44	**22315EX**	**22315EXK**
	160	55	2.1	**22315AEX**	**22315AEXK**	495000	415000	4,350	5,500	5	10	4	87.0	148.0	2.0	0.39	1.72	2.56	1.68	5.44	**22315AEX**	**22315AEXK**

Note: Suffix K or K30 means tapered bore (1/12 or 1/30).