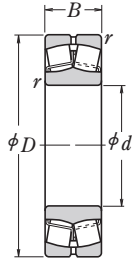
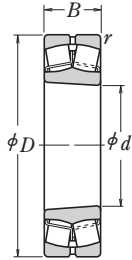


SPHERICAL ROLLER BEARINGS

Bore Diameter 120 – 130 mm



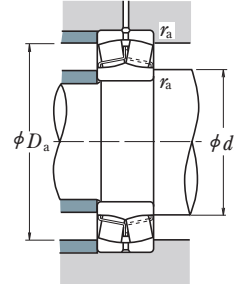
Cylindrical Bore



Tapered Bore



Without an Oil Groove or Holes

**Dynamic Equivalent Load**

$$P = XF_r + YF_a$$

$F_a/F_r \leq e$		$F_a/F_r > e$	
X	Y	X	Y
1	Y_3	0.67	Y_2

Static Equivalent Load

$$P_0 = F_r + Y_0 F_a$$

The values of e , Y_2 , Y_3 , and Y_0 are given in the table below.

Boundary Dimensions (mm)				Basic Load Ratings (N)		Speeds (min ⁻¹) Limiting Speeds				Bearing Designations		Abutment and Fillet Dimensions (mm)				Constant	Axial Load Factors				Mass (kg)
d	D	B	r min.	C_r	C_{0r}	Thermal Speed Rating (Oil Bath)	Mechanical (Forced Oil Circulation)	Grease	Oil (Oil Bath)	Cylindrical Bore	Tapered Bore ⁽¹⁾	d_a min.	d_a max.	D_a max.	D_a min.	r_a max.	e	Y_2	Y_3	Y_0	approx.
120	180	46	2	395 000	525 000	3 200	4 500	1 800	2 200	*23024CAME4	*23024CAMKE4	130	—	170	163	2	0.22	4.5	3.0	2.9	4.11
	180	46	2	395 000	525 000	3 200	4 500	1 800	2 200	*23024CDE4	*23024CDKE4	130	134	170	163	2	0.22	4.5	3.0	2.9	4.11
	180	60	2	480 000	680 000	2 600	3 600	1 500	2 000	*24024CAME4	*24024CAMK30E4	130	—	170	158	2	0.32	3.2	2.1	2.1	5.33
	180	60	2	495 000	705 000	2 600	3 600	1 500	2 000	*24024CE4	*24024CK30E4	130	131	170	158	2	0.32	3.2	2.1	2.1	5.33
	200	62	2	580 000	720 000	2 800	3 600	1 400	1 800	*23124CDE4	*23124CAMKE4	130	—	190	175	2	0.29	3.5	2.4	2.3	7.85
	200	62	2	580 000	720 000	2 800	3 600	1 400	1 800	*23124CE4	*23124CKE4	130	138	190	175	2	0.29	3.5	2.4	2.3	7.85
	200	80	2	695 000	905 000	2 000	3 000	1 400	1 800	*24124CAME4	*24124CAMK30E4	130	—	190	171	2	0.37	2.7	1.8	1.8	10
	200	80	2	720 000	950 000	2 000	3 000	1 400	1 800	*24124CE4	*24124CK30E4	130	136	190	171	2	0.37	2.7	1.8	1.8	10
	215	58	2.1	685 000	765 000	3 200	3 000	2 400	3 000	*22224EAE4	*22224EAKE4	132	142	203	190	2	0.25	3.9	2.7	2.6	8.8
	215	76	2.1	790 000	970 000	2 200	3 000	1 300	1 700	*23224CAME4	*23224CAMKE4	132	—	203	182	2	0.34	2.9	2.0	1.9	12.1
	215	76	2.1	790 000	970 000	2 200	3 000	1 300	1 700	*23224CE4	*23224CKE4	132	140	203	182	2	0.34	2.9	2.0	1.9	12.1
	260	86	3	1 190 000	1 320 000	—	1 400	1 100	1 400	*23224EAE4	*23224EAKE4	134	157	246	222	2.5	0.35	2.9	1.9	1.9	22.2
130	200	52	2	500 000	655 000	3 000	3 800	1 700	2 000	*23026CAME4	*23026CAMKE4	140	—	190	180	2	0.23	4.3	2.9	2.8	5.98
	200	52	2	500 000	655 000	3 000	3 800	1 700	2 000	*23026CDE4	*23026CDKE4	140	147	190	180	2	0.23	4.3	2.9	2.8	5.98
	200	69	2	620 000	865 000	2 200	3 200	1 400	1 800	*24026CAME4	*24026CAMK30E4	140	—	190	175	2	0.31	3.2	2.2	2.1	7.84
	200	69	2	620 000	865 000	2 200	3 200	1 400	1 800	*24026CE4	*24026CK30E4	140	143	190	175	2	0.31	3.2	2.2	2.1	7.84
	210	64	2	630 000	825 000	2 600	3 400	1 300	1 700	*23126CAME4	*23126CAMKE4	140	—	200	184	2	0.28	3.6	2.4	2.4	8.69
	210	64	2	630 000	825 000	2 600	3 400	1 300	1 700	*23126CE4	*23126CKE4	140	149	200	184	2	0.28	3.6	2.4	2.4	8.69
	210	80	2	735 000	1 010 000	1 800	2 800	1 300	1 700	*24126CAME4	*24126CAMK30E4	140	—	200	180	2	0.37	2.7	1.8	1.8	10.7
	210	80	2	735 000	1 010 000	1 800	2 800	1 300	1 700	*24126CE4	*24126CK30E4	140	146	200	180	2	0.35	2.9	1.9	1.9	10.7
	230	64	3	820 000	940 000	2 800	2 600	2 200	2 600	*22226EAE4	*22226EAKE4	144	152	216	204	2.5	0.26	3.8	2.6	2.5	11
	230	80	3	875 000	1 080 000	2 000	2 800	1 200	1 600	*23226CAME4	*23226CAMKE4	144	—	216	196	2.5	0.34	2.9	2.0	1.9	14.3
	230	80	3	875 000	1 080 000	2 000	2 800	1 200	1 600	*23226CE4	*23226CKE4	144	150	216	196	2.5	0.34	2.9	2.0	1.9	14.3
	280	93	4	1 240 000	1 350 000	1 800	2 600	1 300	1 600	*23226CAME4	*23226CAMKE4	148	—	262	236	3	0.34	2.9	2.0	1.9	28.1
	280	93	4	1 240 000	1 350 000	1 900	2 600	1 300	1 600	*23226CE4	*23226CKE4	148	166	262	236	3	0.34	2.9	2.0	1.9	28.1

Note ⁽¹⁾ Suffixes K and K30 represent bearings with tapered bores (taper 1:12 or 1:30).

Remarks

- Bearings denoted by an asterisk (*) are NSKPS bearings; they come standard with an oil groove and holes.
- The recommended fits (shaft tolerances) on Page A164 are different for NSKPS bearings, with light loads defined as $\leq 0.05C_r$, normal loads as 0.05 to $0.10C_r$, and heavy loads as $> 0.10C_r$.
- For the dimensions of adapters and withdrawal sleeves, refer to Pages C351 and C357.