

TECHNICAL DATA

Free Space of Spherical Roller Bearings

Spherical roller bearings have self-aligning capabilities and the capacity to carry substantially large radial and bi-axial loads. For these reasons, this bearing is used widely in many applications, such as plunger blocks. Application problems include a long span, which causes substantial deflection of the shaft, installation errors, and axial misalignment. These bearings may be exposed to large radial or shock loads.

Grease lubrication is common for spherical roller bearings because it simplifies the seal construction around the housing and makes maintenance and inspection easier. In this case, it is important to select a grease appropriate to the operating conditions and to fill the bearing with the proper amount of grease while considering the housing internal space.

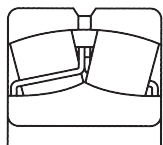
The amount of bearing free space for various spherical roller bearings is shown in Table 1. Under general operating conditions, a user may pack up to 1/3 to 2/3 of the free space of the bearing with grease.

Table 1 Free Space of Spherical Roller Bearings (EA, C, CD, and CA)

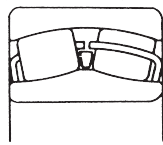
Units: cm³

Bearing Bore No.	Bearing Free Space				
	Bearing Series				
	230	231	222	232	223
11	—	—	29	—	78
12	—	—	42	—	96
13	—	—	48	—	113
14	—	—	52	—	139
15	—	—	57	—	170
16	—	—	71	—	206
17	—	—	91	—	234
18	—	—	110	130	283
19	—	—	135	—	327
20	—	—	169	203	410
22	100	150	242	294	560
24	109	228	297	340	700
26	161	240	365	405	955
28	170	292	400	530	1 230
30	209	465	505	680	1 430
32	254	575	680	850	1 710
34	355	610	785	1 090	2 070
36	465	785	810	1 120	2 460
38	565	970	1 160	1 340	2 830
40	715	1 160	1 400	1 640	2 900
44	940	1 500	1 880	2 270	3 750
48	1 030	1 900	2 550	3 550	4 700
52	1 530	2 940	3 300	4 750	5 900
56	1 820	3 150	3 400	4 950	7 250
60	2 200	4 050	4 300	6 200	8 750

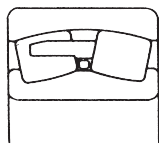
Remarks 22211 to 22226 and 22311 to 22324 are EA bearings.
 23122 to 23148 and 23218 to 23244 are C bearings.
 23022 to 23036 and 22228 to 22236 are CD bearings.
 23038 to 23060, 23152 to 23160, 22238 to 22260,
 23248 to 23260, and 22326 to 22360 are CA bearings.



EA type



C, CD type



CA type