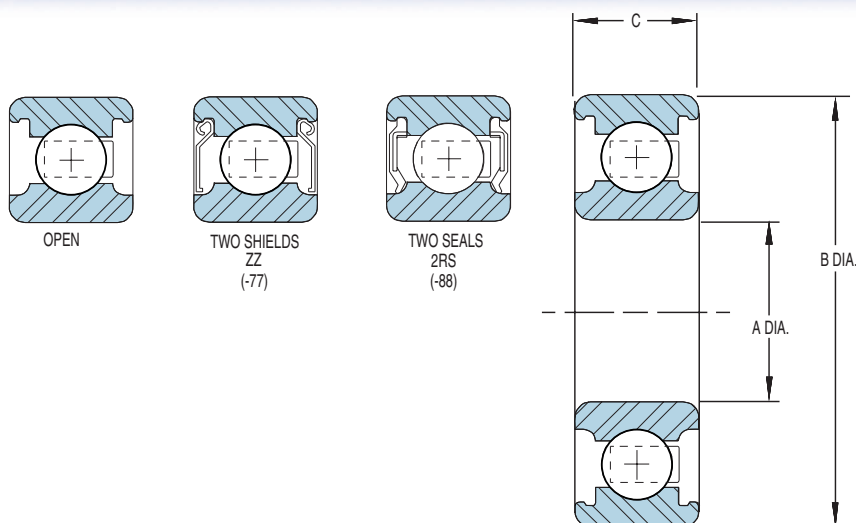
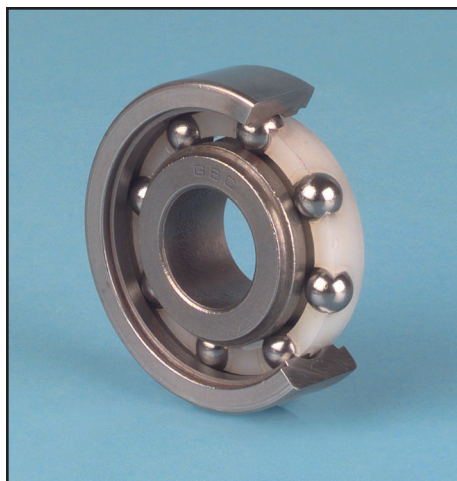


# 20000 Unground Radial Series



The unground radial series is designed to provide inexpensive, anti-friction bearing operation in applications where loads and speeds are moderate. These bearings are manufactured from select carbon steel, are case hardened, and have nylon retainers to insure long life and maximum shock resistance. Bearings are ground on the outside diameter to insure proper housing fit. Since the raceways for these bearings are not ground, maximum recommended speed is 2500 RPM. Bearings are available open, shielded or sealed and are factory lubricated with grease. In addition to the standard sizes shown, specials can be supplied to accommodate a variety of service conditions and housing designs.

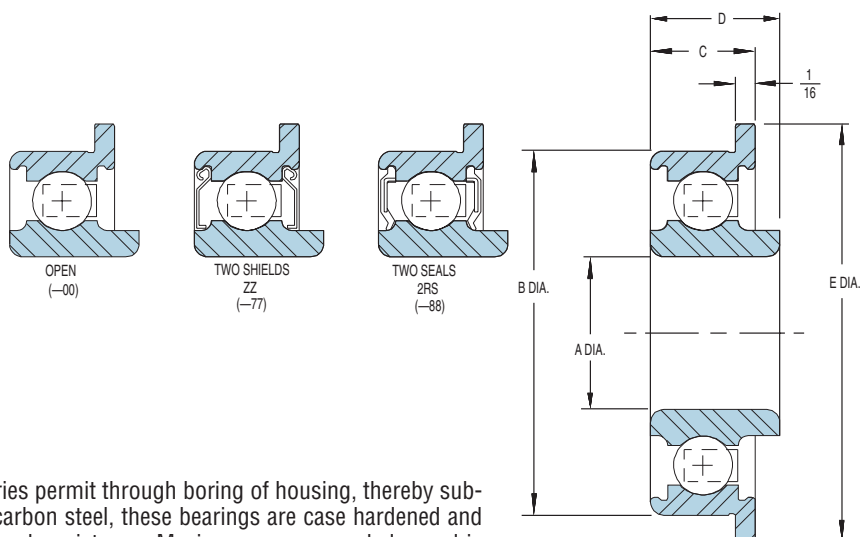
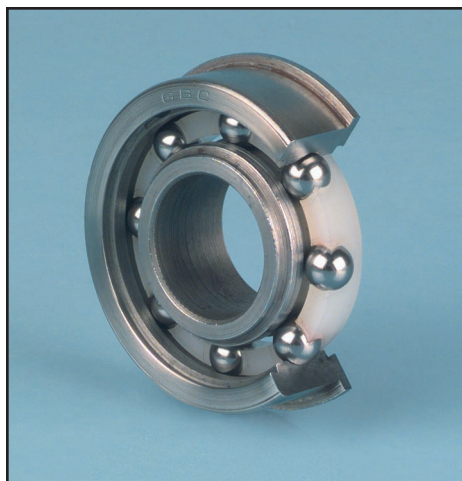
BASIC BEARING NUMBER	BORE A tol. +.005 -.000	OUTSIDE DIAMETER B tol. +.0000 -.0005	WIDTH C tol. ±.005	BASIC DYNAMIC LOAD <sup>1</sup> (lbs)	WEIGHT <sup>2</sup> (lbs)
21161	.187	.6875	†.250/.312	300	.020
21162	.250	.6875	†.250/.312	300	.014
21461	.312	.8750	†.281/.344	450	.028
21462	.375	.8750	†.281/.344	450	.028
21561	.312	.9062	.312	450	.033
21562	.375	.9062	.312	450	.033
21563	.437	.9062	.312	364	.029
21861	.375	1.1250	.375	691	.064
21862	.437	1.1250	.375	691	.059
21863	.500	1.1250	.375	691	.055
22261	.437	1.3750	.437	915	.104
22262	.500	1.3750	.437	915	.101
22263	.562	1.3750	.437	915	.096
22264	.625	1.3750	.437	915	.087
22661	.625	1.6250	.500	1171	.163
22662	.750	1.6250	.500	1171	.145
22861	.625	1.7500	.500	1171	.209
22862	.750	1.7500	.500	1171	.190
23261	.750	2.0000	.562	1749	.283
23262	.875	2.0000	.562	1749	.258
23263	1.000	2.0000	.562	1749	.224

†NOTE: When two widths are listed, the first dimension applies for open or shielded bearings. The second dimension applies for sealed bearings.

<sup>1</sup> Dynamic Loads are based on 1 million revolutions.

<sup>2</sup> Weight is based on an open, oiled bearing.

# 30000 Unground Flanged Series



Integral flanges on the 30000 unground flanged series permit through boring of housing, thereby substantially reducing mounting cost. Made of select carbon steel, these bearings are case hardened and have nylon retainers for long life and maximum shock resistance. Maximum recommended speed is 2500 RPM. Bearings may be supplied open or with seals and/or shields, and all units are factory lubricated with grease.

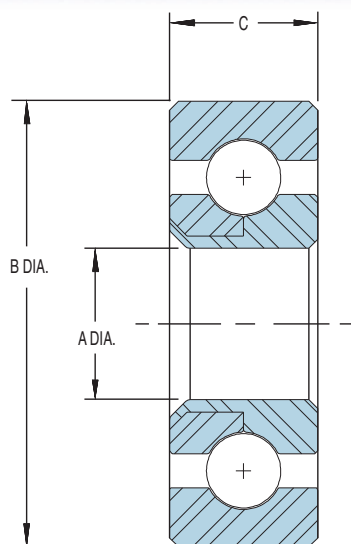
BASIC BEARING NUMBER	BORE A tol. +.005 -.000	OUTSIDE DIAMETER B tol. +.005 -.000	WIDTH C OUTER RING tol. ±.005	WIDTH D INNER RING tol. ±.010	E tol. ±.010	BASIC DYNAMIC LOAD <sup>1</sup> (lbs)	WEIGHT <sup>2</sup> (lbs)
31161	.187	.687	.312	.375	.812	300	.023
31162	.250	.687	.312	.375	.812	300	.021
31461	.312	.875	.344	.406	1.000	450	.036
31462	.375	.875	.344	.406	1.000	450	.032
31561	.312	.906	.344	.406	1.000	450	.037
31562	.375	.906	.344	.406	1.000	450	.037
31861	.375	1.125	.375	.437	1.250	691	.070
31862	.437	1.125	.375	.437	1.250	691	.065
31863	.500	1.125	.375	.437	1.250	691	.061
32261	.437	1.375	.437	.500	1.500	915	.114
32262	.500	1.375	.437	.500	1.500	915	.111
32264	.625	1.375	.437	.500	1.500	915	.094
32661	.625	1.625	.500	.562	1.750	1171	.170
32662	.750	1.625	.500	.562	1.750	1171	.153
32861	.625	1.750	.500	.562	1.875	1171	.217
32862	.750	1.750	.500	.562	1.875	1171	.200
33261	.750	2.000	.562	.625	2.125	1749	.300
33262	.875	2.000	.562	.625	2.125	1749	.265
33263	1.000	2.000	.562	.625	2.125	1749	.239

<sup>1</sup> Dynamic Loads are based on 1 million revolutions.

<sup>2</sup> Weight is based on an open, oiled bearing.

# 20000 Unground Radial Series

## FULL BALL COMPLEMENT



Full complement unground radial bearings are designed for moderate loads, and speeds up to 1500 RPM. Inner and outer rings are machined from select carbon steel, then carefully hardened for long life and maximum shock resistance. All bearings are zinc plated for protection against corrosion.

These bearings are used in business machines, appliances, conveyors, displays, and many other industrial applications.

BASIC BEARING NUMBER	BORE A tol. +.005 -.000	OUTSIDE DIAMETER B tol. +.000 -.005	WIDTH C tol. ±.010	BASIC DYNAMIC LOAD <sup>1</sup> (lbs)	WEIGHT (lbs)
21100-01	.187	.687	.250	287	.021
21101-01	.250	.687	.250	287	.017
21208-01	.250	.750	.250	306	.023
21401-01	.187	.875	.250	397	.038
21404-01	.250	.875	.250	397	.033
21481-01	.375	.875	.250	356	.028
21482-01	.312	.875	.250	356	.030
21485-01	.437	.875	.250	258	.027
21501-01	.375	.906	.312	371	.037
21517-01	.375	.937	.312	371	.042
21518-01	.312	.937	.312	371	.046
21519-01	.437	.937	.312	371	.039
21529-01	.312	.906	.312	371	.043
21556-01	.437	.906	.312	371	.035
21603-01	.250	1.000	.312	484	.050
21604-01	.375	1.000	.312	484	.051
21709-01	.437	1.062	.375	509	.060
21710-01	.250	1.062	.250	484	.060
21712-01	.312	1.062	.250	484	.049
21713-01	.375	1.062	.250	484	.046
21715-01	.375	1.062	.375	484	.066
21737-01	.312	1.062	.375	484	.071

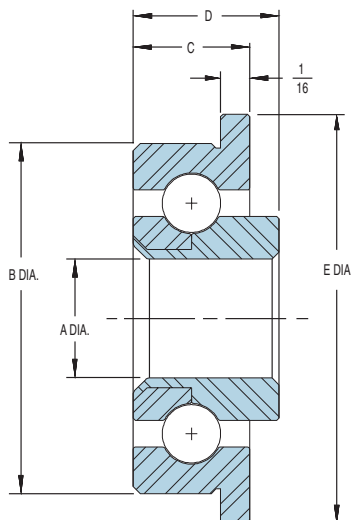
BASIC BEARING NUMBER	BORE A tol. +.005 -.000	OUTSIDE DIAMETER B tol. +.000 -.005	WIDTH C tol. ±.010	BASIC DYNAMIC LOAD <sup>1</sup> (lbs)	WEIGHT (lbs)
21803-01	.500	1.125	.375	533	.068
21817-01	.437	1.125	.375	533	.071
21846-01	.375	1.125	.375	533	.077
22006-01	.375	1.250	.375	533	.101
22007-01	.500	1.250	.375	533	.093
22107-01	.312	1.281	.312	533	.092
22108-01	.500	1.281	.312	533	.082
22142-01	.375	1.281	.312	533	.090
22211-01	.625	1.375	.437	769	.113
22213-01	.500	1.375	.437	769	.126
22405-01	.500	1.500	.437	769	.164
22407-01	.625	1.500	.437	769	.151
22603-01	.750	1.625	.375	825	.143
22606-01	.687	1.625	.375	825	.153
22607-01	.750	1.625	.500	825	.188
22801-01	.500	1.750	.563	1187	.291
22807-01	.750	1.750	.563	1187	.251
23011-01	.875	1.875	.500	1291	.223
23201-01	.750	2.000	.500	1384	.312
23210-01	1.000	2.000	.500	1384	.267
23601-01	1.125	2.250	.625	1384	.473
23701-01	1.250	2.312	.625	1432	.486

<sup>1</sup> Dynamic Loads are based on 1 million revolutions.



# 30000 Unground Flanged Series

## FULL BALL COMPLEMENT



Unground radial flanged bearings are designed for moderate loads and speeds up to 1500 RPM. The flange positions the bearing during installation eliminating the need for snap rings or counter-boring the housing. Inner and outer rings are machined from select carbon steel, then carefully hardened for long life and maximum shock resistance. All bearings contain a full complement of precision steel balls. All bearings are zinc plated for protection against corrosion.

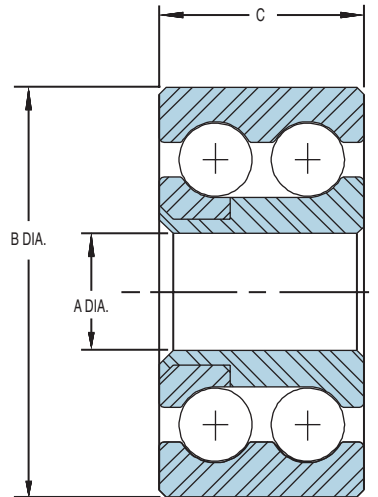
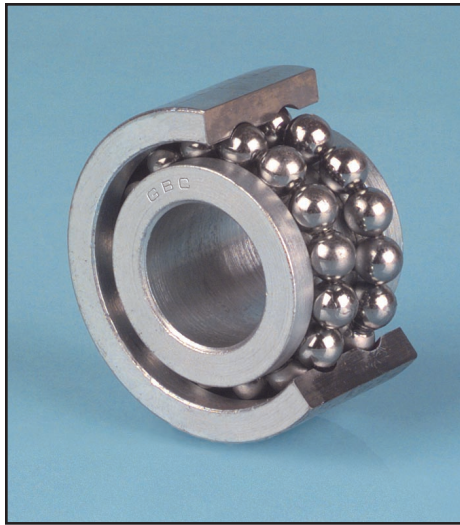
These bearings are used in appliances, business machines, displays, conveyors, and other industrial applications.

BASIC BEARING NUMBER	BORE A tol. +.005 -.000	OUTSIDE DIAMETER B tol. +.005 -.000	WIDTH C OUTER RING tol. ±.010	WIDTH D INNER RING tol. ±.015	E tol. ±.015	BASIC DYNAMIC LOAD <sup>1</sup> (lbs)	WEIGHT (lbs)
31205-01	.250	.687	.250	.250	.750	287	.019
31206-01	.250	.687	.250	.312	.750	287	.020
31207-01	.187	.625	.187	.203	.750	243	.014
31405-01	.250	.750	.250	.312	.875	287	.027
31616-01	.375	.906	.312	.350	1.000	356	.043
31617-01	.437	.906	.312	.375	1.000	356	.040
31622-01	.250	.875	.250	.312	1.000	356	.040
31623-01	.312	.875	.250	.312	1.000	341	.036
31702-01	.250	.906	.250	.375	1.031	356	.048
31703-01	.315	.906	.312	.375	1.031	356	.051
31704-01	.375	.906	.312	.375	1.031	356	.045
31705-01	.375	.906	.343	.437	1.031	356	.053
31706-01	.437	.906	.343	.437	1.031	356	.044
31910-01	.375	1.062	.375	.437	1.187	509	.076
31911-01	.437	1.062	.375	.437	1.187	509	.072
32004-01	.375	1.125	.375	.437	1.250	533	.087
32017-01	.312	1.125	.375	.437	1.250	533	.092
32018-01	.500	1.125	.375	.437	1.250	533	.078
32020-01	.500	1.187	.375	.437	1.250	533	.089
32212-01	.500	1.250	.375	.437	1.375	707	.099
32213-01	.625	1.250	.375	.437	1.375	594	.086
32418-01	.375	1.375	.437	.468	1.500	769	.150
32420-01	.500	1.375	.437	.468	1.500	769	.140
32421-01	.625	1.375	.437	.468	1.500	769	.126
32423-01	.750	1.375	.437	.468	1.500	650	.118
32703-01	.500	1.500	.437	.687	1.656	769	.211
32704-01	.625	1.500	.437	.484	1.656	769	.165
32705-01	.500	1.578	.500	.593	1.687	1000	.220
32707-01	.625	1.562	.437	.562	1.687	798	.193
32708-01	.750	1.562	.437	.468	1.687	798	.171
32807-01	.500	1.625	.500	.562	1.750	1187	.236
33006-01	.500	1.750	.562	.625	1.875	1187	.313
33103-01	.750	1.750	.562	.578	1.937	1187	.260
33206-01	.500	1.875	.500	.625	2.000	1291	.341
33207-01	.750	1.875	.500	.562	2.000	1291	.278
33408-01	.750	2.000	.500	.562	2.125	1384	.345
33409-01	1.000	2.000	.500	.625	2.125	1384	.307

<sup>1</sup> Dynamic Loads are based on 1 million revolutions.

# 20000 Unground Radial Series

## DOUBLE ROW FULL BALL COMPLEMENT



Unground double row bearings are recommended for applications where the load capacity of a single row bearing is insufficient, and because of space restrictions, a larger, single row bearing cannot be used. The bore and outside diameter are generally interchangeable with single row radial bearings.

The inner and outer rings are machined from select carbon steel, then carefully hardened for long life and maximum shock resistance. They contain a full complement of precision steel balls. The two rows of balls provide stability. All bearings are zinc plated for protection against corrosion.

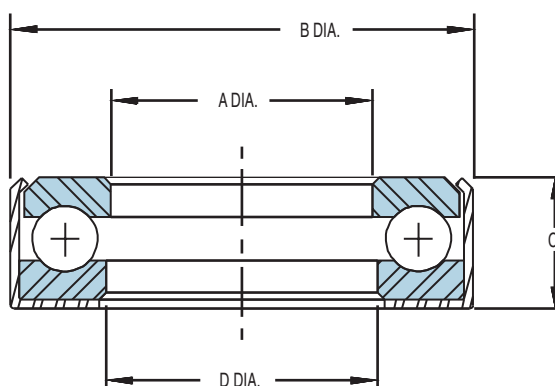
These bearings are suitable for heavy duty work loads in wheels, conveyor rollers, cam followers, etc.

BASIC BEARING NUMBER	BORE A tol. +.005 -.000	OUTSIDE DIAMETER B tol. +.000 -.005	WIDTH C tol. ±.010	BASIC DYNAMIC LOAD <sup>1</sup> (lbs)	WEIGHT (lbs)
21139-01	.250	.687	.437	466	.030
21486-01	.250	.875	.437	645	.061
21487-01	.312	.875	.437	579	.053
21488-01	.375	.875	.437	579	.046
21489-01	.437	.875	.437	419	.045
21557-01	.312	.937	.500	602	.067
21558-01	.375	.937	.500	602	.062
21559-01	.437	.937	.500	602	.058
21738-01	.375	1.062	.562	827	.093
21739-01	.437	1.062	.562	827	.091
21850-01	.375	1.125	.562	865	.119
21851-01	.500	1.125	.562	865	.093
21852-01	.562	1.125	.562	900	.084
22143-01	.375	1.281	.531	865	.107
22295-01	.625	1.375	.625	1249	.160
22458-01	.500	1.500	.750	1249	.209
22459-01	.625	1.500	.750	1249	.194
22618-01	.750	1.625	.625	1928	.217
22816-01	.750	1.750	.937	1928	.388
23012-01	.875	1.875	.875	2097	.372
23211-01	1.000	2.000	.875	2249	.450

<sup>1</sup> Dynamic Loads are based on 1 million revolutions.

# Unground Banded Thrust Series

## FULL BALL COMPLEMENT



Unground banded thrust bearings are designed for moderate speeds and loads. They contain a full complement of hardened steel balls. Races are cold formed then carefully hardened for high resistance to wear. The soft steel housing acts as a shield to help keep lubricant in and contaminants out. Banded thrust bearings are especially suited for such applications as jacks, hoists, hinges, display stands, revolving doors and automotive steering mechanisms.

BASIC BEARING NUMBER	UPPER RACE A tol. +.010 -.000	OUTSIDE DIAMETER B tol. ±.010	WIDTH C tol. ±.010	LOWER RACE D tol. ±.010	BASIC DYNAMIC LOAD <sup>1</sup> (lbs)	WEIGHT (lbs)
4450-00	.250	.843	.328	.275	570	.032
4451-00	.375	1.047	.360	.400	660	.057
4452-00	.438	1.047	.360	.462	651	.042
4453-00	.453	.859	.281	.478	443	.024
4454-00	.500	1.266	.438	.525	1325	.093
4455-00	.500	1.000	.344	.525	859	.042
4456-00	.563	1.344	.438	.587	1380	.102
4457-00	.625	1.125	.344	.656	492	.048
4458-00	.625	1.422	.453	.650	1432	.118
4459-00	.750	1.656	.547	.775	1582	.195
4460-00	.875	1.891	.594	.900	1650	.265
4462-00	1.000	2.016	.640	1.025	2256	.299
4463-00	1.000	1.969	.625	1.031	1678	.275
4464-00	1.015	1.750	.625	1.031	1943	.209
4465-00	1.063	1.969	.625	1.094	1668	.262
4469-00	1.250	2.344	.625	1.275	1867	.384

<sup>1</sup> Dynamic Loads are based on 1 million revolutions.