

Radial and Angular Contact Bearings

Radial Bearings

RADIAL BEARINGS

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Radial Bearings

Prefixes:

A	stainless steel
F	flanged outer ring
H	snug fit
J	extra loose internal fit
JJ	extra extra loose internal fit
L	internal self-aligning
M	precision ABEC-3
2M	angular-contact, ABEC-3, 15°
3M	angular-contact, ABEC-3, 25°
MM	superprecision, ABEC-7 tolerances
MV	ABEC-7 modified
2MM	angular-contact, ABEC-7, 15°
3MM	angular-contact, ABEC-7, 25°
P	loose fit
R	normal fit
S	extra-small inch-dimension type (Aerolite)
T	tight fit
V	precision ABEC-5
W	wide-type single row (same width inner and outer)
WIR	single row- wide inner only

Bore Size (04 and up: multiply last two numbers by 5 to get bore in millimeters)

00	10mm
01	12mm
02	15mm
03	17mm
04	20mm
05	25mm
12	60mm
20	100mm

Suffixes:

C1, C2, C3, etc. (manufacturing code - Fafnir use only)

FT	full ball complement
K	Conrad, non-filling slot type
W	maximum capacity, filling slot type
WI	angular contact, low-shoulder, outer
WO	angular contact, low-shoulder, inner
WN	angular contact, low-shoulder, inner and outer

W

3

05

K

LL

Numbers: Basic Type Series

S1, 3, 5, 7, etc.	single row inch, extra small
30	single row metric, extra small
100	single row, extra large
200	single row, light
300	single row, medium
5200	double row, light
5300	double row, medium
7200	single row, angular contact, light
7300	single row, angular contact, medium
7400	single row, angular contact, heavy
9100	single row, extra-light
9300	single row, ultra-light
XLS	inch dimension, conrad type

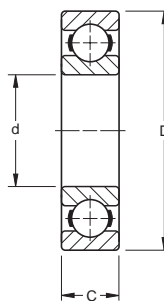
Additional Features

B	spherical outside diameter
BR	cast bronze retainer
D	one shield
DD	two shields
G	Wireloc (snap ring)
L	one Mechanical-Seal
LL	two Mechani-seals
MBR	machined bronze retainer
P	one seal
PP	two seals
PP2, 3, 4, etc.	Tri-Ply Seals if prefix letter is W (example W208PPB5)
R	one land riding rubber seal
RR	two land riding rubber seals
S	external self-aligning
SMBR	iron silicon bronze retainer
T	one felt seal
TT	two felt seals



Ultra Light 9300K Series

The 9300K Series bearings are designed principally for applications where housing diameters are restricted, and it is desirable to maintain relatively large shaft diameters. This series resembles the 9100K series in that respect except that corresponding sizes of the 9300K series have a somewhat thinner section. Machine tools, textile machinery and jet engine gearboxes are among the application fields in which these bearings are used extensively.



DIMENSIONS – TOLERANCES

Bearing Number	Bore d				Outside Diameter D				Width C				Fillet Radius ⁽¹⁾		Wt.		Static Load Rating C ₀		Extended Dynamic Load Rating C _E	
	tolerance +0.0000* +0.000 mm to minus				tolerance +0.0000* +0.000 mm to minus				tolerance +0.0000* +0.000 mm to minus				in.	mm	lbs.	kg	lbs.	N	lbs.	N
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm						
9301K	0.4724	12	0.0003	0.008	0.9449	24	0.00035	0.009	0.236	6	0.005	0.12	0.012	0.3	0.03	0.014	360	1600	830	3650
9302K	0.5906	15	0.0003	0.008	1.1024	28	0.00035	0.009	0.276	7	0.005	0.12	0.012	0.3	0.04	0.018	510	2270	1100	4890
9303K ⁽²⁾	0.6693	17	0.0003	0.008	1.1811	30	0.00035	0.009	0.276	7	0.005	0.12	0.012	0.3	0.06	0.027	570	2540	1180	5250
9305K ⁽²⁾	0.9843	25	0.0004	0.010	1.6535	42	0.00045	0.011	0.354	9	0.005	0.12	0.012	0.3	0.10	0.045	1020	4540	1800	8010
9306K ⁽²⁾⁽³⁾	1.1811	30	0.0004	0.010	1.8504	47	0.00045	0.011	0.354	9	0.005	0.12	0.012	0.3	0.16	0.075	1120	4980	1860	8270
9307K	1.3780	35	0.00045	0.012	2.1654	55	0.0005	0.013	0.394	10	0.005	0.12	0.024	0.6	0.21	0.095	1800	8010	3000	13300
9308K	1.5748	40	0.00045	0.012	2.4409	62	0.0005	0.013	0.472	12	0.005	0.12	0.024	0.6	0.31	0.141	2000	8900	3100	13800
9310K	1.9685	50	0.00045	0.012	2.8346	72	0.0005	0.013	0.472	12	0.005	0.12	0.024	0.6	0.37	0.168	2600	11560	3750	16700
9311K	2.1654	55	0.0006	0.015	3.1496	80	0.0005	0.013	0.512*	13	0.006	0.15	0.039	1	0.46	0.209	3150	14010	4250	18900
9313K	2.5591	65	0.0006	0.015	3.5433	90	0.0006	0.015	0.512*	13	0.006	0.15	0.039	1	0.55	0.250	3600	16010	4400	19600
9316K	3.1496	80	0.0006	0.015	4.3307	110	0.0006	0.015	0.630*	16	0.006	0.15	0.039	1	0.80	0.363	5400	24020	6400	28500

⁽¹⁾ Maximum shaft or housing fillet radius which bearing corners will clear.

⁽²⁾ Also available with rubber seals. Specify 9303PP.

⁽³⁾ Also available with two shields. Specify 9306KDD.

*Width tolerance is +.000" to -.006" (+.00mm to -.15mm)

Extra Light 9100K Series

The Fafnir 9100K Series bearings are designed principally for applications where housing diameters are restricted, and it is desirable to maintain relatively large shaft diameters.

These bearings are electric motor quality for applications where extra quietness is a requirement.

DIMENSIONS – TOLERANCES

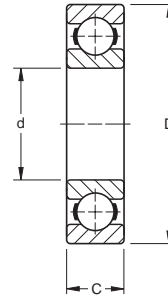
Bearing Number	Bore d				Outside Diameter D				Width C				Fillet Radius ⁽¹⁾		Wt.		Static Load Rating C ₀		Extended Dynamic Load Rating C _E	
	tolerance +0.0000* +0.000 mm to minus				tolerance +0.0000* +0.000 mm to minus				tolerance +0.0000* +0.00 mm to minus				in.	mm	lbs.	kg	lbs.	N	lbs.	N
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm						
9100K	0.3937	10	0.0003	0.008	1.0236	26	0.00035	0.009	0.3150	8	0.005	0.12	0.012	0.3	0.04	0.018	440	1960	1160	5160
9101K	0.4724	12	0.0003	0.008	1.1024	28	0.00035	0.009	0.3150	8	0.005	0.12	0.012	0.3	0.04	0.018	530	2360	1320	5870
9102K	0.5906	15	0.0003	0.008	1.2598	32	0.00045	0.011	0.3543	9	0.005	0.12	0.012	0.3	0.06	0.027	630	2800	1430	6360
9103K	0.6693	17	0.0003	0.008	1.3780	35	0.00045	0.011	0.3937	10	0.005	0.12	0.012	0.3	0.09	0.041	720	3200	1530	6800
9104K	0.7874	20	0.0004	0.010	1.6535	42	0.00045	0.011	0.4724	12	0.005	0.12	0.024	0.6	0.16	0.073	1120	5000	2400	10700
9105K	0.9843	25	0.0004	0.010	1.8504	47	0.00045	0.011	0.4724	12	0.005	0.12	0.024	0.6	0.17	0.077	1290	5740	2550	11300
9106K	1.1811	30	0.0004	0.010	2.1654	55	0.0005	0.013	0.5118	13	0.005	0.12	0.039	1.0	0.26	0.118	1800	8010	3350	14600
9107K	1.3780	35	0.00045	0.012	2.4409	62	0.0005	0.013	0.5512	14	0.005	0.12	0.039	1.0	0.32	0.145	2240	9960	4050	18000
9108K	1.5748	40	0.00045	0.012	2.6772	68	0.0005	0.013	0.5906	15	0.005	0.12	0.039	1.0	0.43	0.195	2750	12200	4500	20000
9109K	1.7717	45	0.00045	0.012	2.9528	75	0.0005	0.013	0.6299	16	0.005	0.12	0.039	1.0	0.55	0.249	3350	14900	5400	24000
9110K	1.9685	50	0.00045	0.012	3.1496	80	0.0005	0.013	0.6299	16	0.005	0.12	0.039	1.0	0.60	0.272	3600	16000	5600	24900
9111K	2.1654	55	0.0006	0.015	3.5433	90	0.0006	0.015	0.7087	18	0.006	0.15	0.039	1.0	0.86	0.390	4650	20700	7200	32000
9112K	2.3622	60	0.0006	0.015	3.7402	95	0.0006	0.015	0.7087	18	0.006	0.15	0.039	1.0	0.92	0.417	5100	22600	7500	33400
9113K	2.5591	65	0.0006	0.015	3.9370	100	0.0006	0.015	0.7087	18	0.006	0.15	0.039	1.0	0.98	0.445	5500	24500	7800	34700
9114K	2.7559	70	0.0006	0.015	4.3307	110	0.0006	0.015	0.7874	20	0.006	0.15	0.039	1.0	1.39	0.630	6700	29800	9720	43200
9115K	2.9528	75	0.0006	0.015	4.5276	115	0.0006	0.015	0.7874	20	0.006	0.15	0.039	1.0	1.50	0.680	7350	32700	10000	44500
9116K	3.1496	80	0.0006	0.015	4.9213	125	0.0007	0.018	0.8661	22	0.006	0.15	0.039	1.0	1.95	0.885	8000	35600	12200	54300
9117K	3.3465	85	0.0008	0.020	5.1181	130	0.0007	0.018	0.8661	22	0.008	0.20	0.039	1.0	2.13	0.966	8000	35600	12700	56500
9118K	3.5433	90	0.0008	0.020	5.5118	140	0.0007	0.018	0.9449	24	0.008	0.20	0.059	1.5	2.55	1.157	10800	48000	15000	66700
9119K	3.7402	95	0.0008	0.020	5.7087	145	0.0007	0.018	0.9449	24	0.008	0.20	0.059	1.5	2.62	1.188	11800	52500	15300	68100
9120K	3.9370	100	0.0008	0.020	5.9055	150	0.0007	0.018	0.9449	24	0.008	0.20	0.059	1.5	2.90	1.315	11800	52500	15300	68100
9121K	4.1339	105	0.0008	0.020	6.2992	160	0.0010	0.025	1.0236	26	0.008	0.20	0.079	2.0	3.59	1.628	13400	59600	17600	76900
9122K	4.3307	110	0.0008	0.020	6.6929	170	0.0010	0.025	1.1024	28	0.008	0.20	0.080	2.0	—	—	16000	71100	20800	92500
9124K	4.7244	120	0.0008	0.020	7.0866	180	0.0010	0.025	1.1024	28	0.008	0.20	0.079	2.0	4.85	2.200	16000	71100	20000	88900
9126K	5.1181	130	0.0010	0.025	7.8740	200	0.0012	0.030	1.2992	33	0.010	0.25	0.079	2.0	7.39	3.352	20400	90700	26000	115600
9128K	5.5118	140	0.0010	0.025	8.2677	210	0.0012	0.030	1.2992	33	0.010	0.25	0.080	2.0	8.00	3.629	23600	105000	28000	124500

⁽¹⁾ Maximum shaft or housing fillet radius which bearing corners will clear.

Continued on the next page.



Extra Light 9100K Series (continued)



DIMENSIONS – TOLERANCES

Bearing Number	Bore d				Outside Diameter D				Width C				Fillet Radius ⁽¹⁾		Wt.		Static Load Rating C ₀		Extended Dynamic Load Rating C _e	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg	lbs.	N	lbs.	N
9130K	5.9055	150	0.0010	0.025	8.8583	225	0.0012	0.030	1.3780	35	0.010	0.25	0.08	2.0	12.0	5.5	20800	92500	25500	113400
9132K	6.2992	160	0.0010	0.025	9.4488	240	0.0012	0.030	1.4961	38	0.010	0.25	0.08	2.0	14.8	6.7	31000	138000	37500	166800
9134K	6.6929	170	0.0010	0.025	10.2362	260	0.0014	0.035	1.6535	42	0.010	0.25	0.08	2.0	19.8	9.0	36000	160000	42500	189000
9136K	7.0866	180	0.0010	0.025	11.0236	280	0.0014	0.035	1.8110	44	0.010	0.25	0.08	2.0	24.3	11.0	44000	195700	50000	222000
9138K	7.4803	190	0.0012	0.030	11.4173	290	0.0014	0.035	1.8110	46	0.012	0.30	0.08	2.0	26.5	12.0	45500	204000	48000	216000
9140K	7.8740	200	0.0012	0.030	12.2047	310	0.0014	0.035	2.0079	51	0.012	0.30	0.08	2.0	34.0	15.4	55000	245000	55000	245000
9144K	8.6614	220	0.0012	0.030	13.3858	340	0.0016	0.040	2.2047	56	0.012	0.30	0.10	2.5	44.2	20.0	65500	290000	63000	280000
9146K	9.4488	240	0.0012	0.030	14.1732	360	0.0016	0.040	2.2047	56	0.012	0.30	0.10	2.5	47.3	21.5	72000	320000	65500	290000
9152K	10.2362	260	0.0014	0.035	15.7480	400	0.0016	0.040	2.5591	65	0.014	0.35	0.12	3.0	69.6	31.6	90000	400000	78000	345000
9156K	11.0236	280	0.0014	0.035	16.5354	420	0.0018	0.045	2.5591	65	0.014	0.35	0.12	3.0	73.8	33.5	80000	355000	80000	360000
9160K	11.8110	300	0.0014	0.035	18.1102	460	0.0018	0.045	2.9134	74	0.014	0.35	0.12	3.0	102.9	46.6	118000	520000	93000	415000
9164K	12.5984	320	0.0016	0.040	18.8976	480	0.0018	0.045	2.9134	74	0.016	0.40	0.12	3.0	108.3	49.1	127000	570000	98000	430000
9180K	15.7480	400	0.0016	0.040	23.6220	600	0.0020	0.050	3.5433	90	0.016	0.40	0.16	4.0	—	—	180000	815000	122000	550000
9100K/600	23.6220	600	0.0020	0.050	34.2520	870	0.0039	0.100	4.6457	118	0.020	0.50	0.20	5.0	—	—	340000	1539000	180000	800000

⁽¹⁾ Maximum shaft or housing fillet radius which bearing corners will clear.

SHIELDS, SEALS AND SNAP RING COMBINATIONS

Shields and Seals					Snap Ring (Wireloc) ⁽¹⁾			Snap Ring (Wireloc) ⁽¹⁾					
One Shield D	Two Shields DD	One Seal P	Two Seals PP	One Shield And Seal PD	Open Type G	Two Shields DDG	Two Seals PPG	O.D.	Thickness		Offset		
								in	mm	in	mm	in	mm
9100KD	9100KDD	9100P	9100PP	9100PD	—	—	—	—	—	—	—	—	—
9101KD	9101KDD	9101P	9101PP	9101PD	—	—	—	—	—	—	—	—	—
9102KD	9102KDD	9102P	9102PP	—	9102KG	9102KDDG	9102PPG	1 1/16	36.5	0.042	1.07	0.120	3.05
9103KD	9103KDD	9103P	9103PP	9103PD ⁽²⁾	9103KG	9103KDDG	9103PPG	1 3/64	39.3	0.042	1.07	0.120	3.05
9104KD	9104KDD	9104P	9104PP	—	9104KG	9104KDDG	9104PPG	1 1/16	46.0	0.042	1.07	0.120	3.05
9105KD	9105KDD	9105P	9105PP	—	—	—	—	2 1/16	52.4	0.042	1.07	0.120	3.05
9106KD	9106KDD	9106P	9106PP	9106PD	9106KG	9106KDDG	9106PPG	2 3/8	60.3	0.042	1.07	0.120	3.05
9107KD	9107KDD	9107P	9107PP	—	9107KG	9107KDDG	9107PPG	2 21/32	67.5	0.065	1.65	0.143	3.63
9108KD	9108KDD	9108P	9108PP	—	9108KG	9108KDDG	9108PPG	2 29/64	74.2	0.065	1.65	0.159	4.04
9109KD	9109KDD	9109P	9109PP	9109PD	9109KG	9109KDDG	9109PPG	3 1/64	81.4	0.065	1.65	0.159	4.04
9110KD	9110KDD	9110P	9110PP	—	9110KG	—	—	3 1/32	86.5	0.065	1.65	0.159	4.04
9111KD	9111KDD	9111P	9111PP	—	9111KG	—	9111PPG	3 5/64	96.4	0.095	2.41	0.204	5.18
9112KD	9112KDD	9112P	9112PP	—	9112KG	—	—	3 9/64	101.2	0.095	2.41	0.204	5.18
9113KD	9113KDD	9113P	9113PP	9113PD	9113KG	—	9113PPG	4 1/16	106.4	0.095	2.41	0.204	5.18
9114KD	9114KDD	9114P	9114PP	—	9114KG	—	—	4 31/64	116.3	0.095	2.41	0.204	5.18
9115KD	9115KDD	9115P	9115PP	—	—	—	—	4 25/32	121.4	0.095	2.41	0.204	5.18
9117KD	—	—	—	—	9117KG	9117KDDG	—	5 1/2	139.7	0.109	2.77	0.218	5.54
9120KD	—	—	9120NPP	—	—	—	—	6 9/32	159.5	0.109	2.77	0.250	6.35
9121KD	—	—	—	—	—	—	—	6 49/64	169.5	0.109	2.77	0.250	6.35
9124KD	—	9124P	9124PP	—	9124KG	—	—	7 1/32	192.9	0.120	3.05	0.261	6.63

⁽¹⁾ The snap ring is normally packaged separately in the box with bearing.

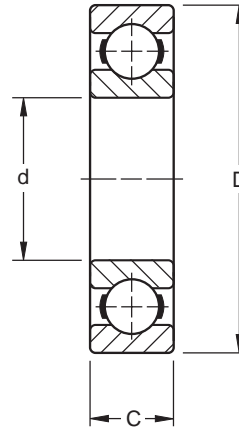
⁽²⁾ Width of bearing is .5000" (12.700mm)



Light 200K Series

The light 200K Series, Conrad-type bearing is well balanced with deep races and uninterrupted race shoulders. Being an excellent, general purpose bearing, it has the capacity to carry radial, thrust in either direction or combined loads.

These bearings are electric motor quality for applications where extra quietness is a requirement.















DIMENSIONS – TOLERANCES

Bearing Number	Bore d				Outside Diameter D				Width C				Fillet Radius ⁽¹⁾		Wt.		Static Load Rating C ₀		Extended Dynamic Load Rating C _E	
	tolerance +0.0000* +0.000 mm to minus				tolerance +0.0000* +0.000 mm to minus				tolerance +0.000* +0.000 mm to minus											
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg	lbs.	N	lbs.	N
200K	0.3937	10	0.0003	0.008	1.1811	30	0.00035	0.009	0.3543	9	0.005	0.12	0.024	0.6	0.06	0.027	585	2600	1530	6800
201K	0.4724	12	0.0003	0.008	1.2598	32	0.00045	0.011	0.3937	10	0.005	0.12	0.024	0.6	0.08	0.036	680	3000	1730	7600
202K	0.5906	15	0.0003	0.008	1.3780	35	0.00045	0.011	0.4331	11	0.005	0.12	0.024	0.6	0.09	0.041	830	3470	1930	8650
203K	0.6693	17	0.0003	0.008	1.5748	40	0.00045	0.011	0.4724	12	0.005	0.12	0.024	0.6	0.14	0.064	1060	4700	2450	10900
204K	0.7874	20	0.0004	0.010	1.8504	47	0.00045	0.011	0.5512	14	0.005	0.12	0.039	1.0	0.23	0.104	1460	6500	3250	14400
205K	0.9843	25	0.0004	0.010	2.0472	52	0.0005	0.013	0.5906	15	0.005	0.12	0.039	1.0	0.28	0.127	1760	7800	3600	16000
206K	1.1811	30	0.0004	0.010	2.4409	62	0.0005	0.013	0.6299	16	0.005	0.12	0.039	1.0	0.43	0.195	2550	11300	5000	22200
207K	1.3780	35	0.00045	0.012	2.8346	72	0.0005	0.013	0.6693	17	0.005	0.12	0.039	1.0	0.64	0.29	3450	15300	6550	29100
208K	1.5748	40	0.00045	0.012	3.1496	80	0.0005	0.013	0.7087	18	0.005	0.12	0.039	1.0	0.83	0.376	4500	20000	8300	36900
209K	1.7717	45	0.00045	0.012	3.3465	85	0.0006	0.015	0.7480	19	0.005	0.12	0.039	1.0	0.94	0.426	4550	20200	8300	36900
210K	1.9685	50	0.00045	0.012	3.5433	90	0.0006	0.015	0.7874	20	0.005	0.12	0.039	1.0	1.05	0.476	5200	23100	9000	40000
211K	2.1654	55	0.0006	0.015	3.9370	100	0.0006	0.015	0.8268	21	0.006	0.15	0.059	1.5	1.4	0.635	6550	29100	11000	49000
212K	2.3622	60	0.0006	0.015	4.3307	110	0.0006	0.015	0.8661	22	0.006	0.15	0.059	1.5	1.78	0.807	8000	35500	13400	60000
213K	2.5591	65	0.0006	0.015	4.7244	120	0.0006	0.015	0.9055	23	0.006	0.15	0.059	1.5	2.24	1.016	9000	39900	14600	65000
214K	2.7559	70	0.0006	0.015	4.9213	125	0.0007	0.018	0.9449	24	0.006	0.15	0.059	1.5	2.44	1.107	9800	43500	16000	71100
215K	2.9528	75	0.0006	0.015	5.1181	130	0.0007	0.018	0.9843	25	0.006	0.15	0.059	1.5	2.64	1.198	10000	44400	16000	71100
216K	3.1496	80	0.0006	0.015	5.5118	140	0.0007	0.018	1.0236	26	0.006	0.15	0.079	2.0	3.27	1.483	12200	54200	18300	81300
217K	3.3465	85	0.0008	0.020	5.9055	150	0.0007	0.018	1.1024	28	0.008	0.20	0.079	2.0	4.10	1.86	14000	62200	21600	95900
218K	3.5433	90	0.0008	0.020	6.2992	160	0.0010	0.025	1.1811	30	0.008	0.20	0.079	2.0	4.87	2.209	16000	71100	24500	109000
220K	3.9370	100	0.0008	0.020	7.0866	180	0.0010	0.025	1.3386	34	0.008	0.20	0.080	2.0	8.98	4.07	20800	93000	30500	134000
221K	4.1339	105	0.0008	0.020	7.4803	190	0.0012	0.030	1.4173	36	0.008	0.20	0.080	2.0	8.32	3.77	20800	93000	28500	127000
222K	4.3307	110	0.0008	0.020	7.8740	200	0.0012	0.030	1.4961	38	0.008	0.20	0.080	2.0	9.47	4.3	23600	104900	34500	153000
224K	4.7244	120	0.0008	0.020	8.4646	215	0.0012	0.030	1.5748	40	0.008	0.20	0.080	2.0	15.56	7.06	30000	133000	39000	173000
226K	5.1181	130	0.0010	0.020	9.0551	230	0.0012	0.030	1.5748	40	0.010	0.25	0.120	3.0	14.63	6.64	33500	149000	42500	189000
228K	5.5118	140	0.0010	0.025	9.8425	250	0.0012	0.030	1.6535	42	0.010	0.25	0.120	3.0	24.66	11.19	36500	162000	45000	200000
230K	5.9055	150	0.0010	0.025	10.6299	270	0.0014	0.035	1.7717	45	0.010	0.25	0.120	3.0	26.8	12.1	40500	180000	49000	218000
232K	6.2992	160	0.0010	0.025	11.4173	290	0.0014	0.035	1.8898	48	0.010	0.25	0.120	3.0	33.1	15.0	53000	235000	58500	260000
234K	6.6929	170	0.0010	0.025	12.2047	310	0.0014	0.035	2.0472	52	0.010	0.25	0.160	4.0	41.1	18.7	62000	276000	65500	291000
236K	7.0866	180	0.0010	0.025	12.5984	320	0.0016	0.040	2.0472	52	0.010	0.25	0.160	4.0	42.7	19.4	67000	298000	69500	309000
238K	7.4803	190	0.0012	0.030	13.3858	340	0.0016	0.040	2.1654	55	0.012	0.30	0.160	4.0	50.7	23.0	65000	290000	67000	300000
240K	7.8740	200	0.0012	0.030	14.1732	360	0.0016	0.040	2.2835	58	0.012	0.30	0.160	4.0	58.2	26.4	83000	375000	80000	355000
242K	8.2677	210	0.0012	0.030	14.9606	380	0.0016	0.040	2.4016	61	0.012	0.30	0.160	4.0	71.4	32.4	76500	335000	73500	325000
244K	8.6614	220	0.0012	0.030	15.7480	400	0.0016	0.040	2.5591	65	0.012	0.30	0.160	4.0	81.4	36.9	86500	380000	80000	355000
246K	9.0551	230	0.0012	0.030	16.5354	420	0.0018	0.045	2.6772	68	0.012	0.30	0.160	4.0	93.3	44.6	95000	425000	85000	380000
248K	9.4488	240	0.0012	0.030	17.3228	440	0.0018	0.045	2.8346	72	0.012	0.30	0.160	4.0	103.1	46.8	116000	520000	102000	455000
250K	9.8425	250	0.0014	0.035	18.1102	460	0.0018	0.045	2.9921	76	0.012	0.30	0.160	4.0	122.4	55.5	129000	585000	110000	490000
252K	10.2362	260	0.0014	0.035	18.8976	480	0.0018	0.045	3.1496	80	0.014	0.35	0.200	5.0	139.0	63.0	143000	640000	118000	520000
256K	11.0236	280	0.0014	0.035	19.6850	500	0.0018	0.045	3.1496	80	0.014	0.35	0.200	5.0	141.4	64.1	160000	710000	125000	560000
260K	11.8110	300	0.0014	0.035	21.2598	540	0.0020	0.050	3.3465	85	0.014	0.35	0.200	5.0	192.7	87.4	150000	670000	116000	520000
264K	12.5984	320	0.0016	0.040	22.8346	580	0.0020	0.050	3.6220	92	0.016	0.40	0.200	5.0	208.5	94.6	220000	980000	160000	710000

⁽¹⁾ Maximum shaft or housing fillet radius which bearing corners will clear.

SHIELDS, SEALS AND SNAP RING COMBINATIONS

Shields and Seals					Snap Ring (Wireloc)							Snap Ring					
												O.D.	Thickness		Offset		
D	DD	(N) P	PD	(N) PP	G	DG	GD	DDG	PG	PPG	PDG	in.	mm	in.	mm	in.	mm
200KD	200KDD	200P	200PD ⁽²⁾	200PP	—	—	—	200KDDG	—	200PPG	—	1 ²³ / ₆₄	34.5	0.042	1.07	0.120	3.05
201KD	201KDD	201P	201PD	201PP	201KG	201KDG	—	201KDDG	—	201PPG	—	1 ⁷ / ₁₆	36.5	0.042	1.07	0.120	3.05
202KD	202KDD	202P	202PD	202PP	202KG	202KDG	—	202KDDG	—	202PPG	—	1 ³⁵ / ₆₄	39.3	0.042	1.07	0.120	3.05
203KD	203KDD	203P	203PD	203PP	203KG	203KDG	—	203KDDG	—	203PPG	—	1 ⁷ / ₈	44.4	0.042	1.07	0.120	3.05
204KD	204KDD	204P	204PD	204PP	204KG	204KDG	—	204KDDG	—	204PPG	—	2 ¹ / ₁₆	52.4	0.042	1.07	0.136	3.45
205KD	205KDD	205P	205PD	205PP	205KG	205KDG	—	205KDDG	—	205PPG	—	2 ¹⁷ / ₆₄	57.5	0.042	1.07	0.136	3.45
206KD	206KDD	206P	206PD	206PP	206KG	206KDG	—	206KDDG	—	206PPG	—	2 ²⁷ / ₃₂	67.6	0.065	1.65	0.190	4.83
207KD	207KDD	207P	207PD	207PP	207KG	207KDG	—	207KDDG	—	207PPG	—	3 ³ / ₆₄	78.2	0.065	1.65	0.190	4.83
208KD	208KDD	208P	—	208PP	208KG	208KDG	—	208KDDG	—	208PPG	—	3 ¹³ / ₃₂	86.5	0.065	1.65	0.190	4.83
209KD	209KDD	209P	—	209PP	209KG	209KDG	—	209KDDG	—	—	—	3 ¹⁹ / ₃₂	91.3	0.065	1.65	0.190	4.83
210KD	210KDD	210P	—	210PP	210KG	210KDG	—	210KDDG	—	210NPPG	—	3 ³¹ / ₆₄	96.4	0.095	2.41	0.220	5.59
211KD	211KDD	211NP	211NPD	211NPP	211KG	211KDG	211KGD	211KDDG	—	211NPPG	211NPDG	4 ⁷ / ₁₆	106.3	0.095	2.41	0.220	5.59
212KD	212KDD	212NP	212NPD	212NPP	212KG	212KDG	—	—	—	212NPPG	212NPDG	4 ³⁷ / ₆₄	116.3	0.095	2.41	0.220	5.59
213KD	213KDD	213NP	—	213NPP	213KG	—	—	213KDDG	—	213NPPG	213NPDG	5 ⁷ / ₃₂	129.4	0.109	2.77	0.265	6.73
214KD	214KDD	214P	—	214NPP	214KG	214KDG	—	—	—	—	—	5 ¹⁹ / ₆₄	134.5	0.109	2.77	0.265	6.73
215KD	215KDD	215P	—	215NPP	—	—	—	—	—	—	—	—	—	—	—	—	—
216KD	216KDD	—	—	216NPP	—	—	—	—	—	—	—	—	—	—	—	—	—
217KD	217KDD	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
218KD	218KDD	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
222KD	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

⁽¹⁾ The snap ring is normally packaged separately in the box with the bearing.

⁽³⁾ Also available in "VV" sealed design, check on availability.

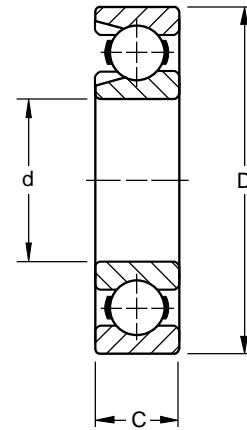
⁽²⁾ Available with snap ring as 200PDG.

Note: "N" prefix for NP(P) seals indicate non-removable seal.



Light 200W Series

The 200W Series, maximum capacity type is dimensionally interchangeable with the 200K type but has greater capacity for supporting heavier radial loads and light thrust loads in either direction. Maximum capacity bearings feature a filling slot in the shoulder of each raceway to assemble an extra large ball complement. Consult The Torrington Company for the availability of sizes other than those listed here.



DIMENSIONS – TOLERANCES

Bearing Number	Bore d				Outside Diameter D				Width C				Fillet ⁽¹⁾ Radius		Wt.		Static Load Rating C ₀		Extended Dynamic Load Rating* C _E	
	tolerance +0.0000" +0.000mm to minus				tolerance +0.0000" +0.000mm to minus				tolerance +0.0000" +0.000mm to minus											
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg	lbs.	N	lbs.	N
202W	0.5906	15	0.0003	0.008	1.3780	35	0.00045	0.011	0.4331	11	0.005	0.12	0.024	0.6	0.12	0.054	1140	5060	2450	11000
204W ⁽²⁾	0.7874	20	0.0004	0.010	1.8504	47	0.00045	0.011	0.5512	14	0.005	0.12	0.039	1.0	0.25	0.113	2120	9300	4400	19500
205W ⁽²⁾	0.9843	25	0.0004	0.010	2.0472	52	0.0005	0.013	0.5906	15	0.005	0.12	0.039	1.0	0.31	0.141	2750	12200	5100	22600
206W	1.1811	30	0.0004	0.010	2.4409	62	0.0005	0.013	0.6299	16	0.005	0.12	0.039	1.0	0.47	0.213	3800	16900	6950	31000
207W	1.3780	35	0.00045	0.012	2.8346	72	0.0005	0.013	0.6693	17	0.005	0.12	0.039	1.0	0.69	0.313	5100	22600	9000	40000
208W	1.5748	40	0.00045	0.012	3.1496	80	0.0005	0.013	0.7087	18	0.005	0.12	0.039	1.0	0.91	0.413	6400	28400	10600	47000
209W	1.7717	45	0.00045	0.012	3.3465	85	0.0006	0.015	0.7480	19	0.005	0.12	0.039	1.0	1.02	0.463	7100	31500	11200	50000
210W	1.9685	50	0.00045	0.012	3.5433	90	0.0006	0.015	0.7874	20	0.005	0.12	0.039	1.0	1.15	0.522	7800	34600	11800	52000
211W	2.1654	55	0.0006	0.015	3.9370	100	0.0006	0.015	0.8268	21	0.006	0.15	0.059	1.5	1.50	0.68	9150	40600	13700	61000
212W	2.3622	60	0.0006	0.015	4.3307	110	0.0006	0.015	0.8661	22	0.006	0.15	0.059	1.5	1.95	0.885	12200	54200	17600	78000
213W	2.5591	65	0.0006	0.015	4.7244	120	0.0006	0.015	0.9055	23	0.006	0.15	0.059	1.5	2.66	1.207	14600	64800	20800	92000
214W	2.7559	70	0.0006	0.015	4.9213	125	0.0007	0.018	0.9449	24	0.006	0.15	0.059	1.5	2.70	1.225	16000	71100	21600	96000
215W	2.9528	75	0.0006	0.015	5.1181	130	0.0007	0.018	0.9843	25	0.006	0.15	0.059	1.5	2.94	1.334	17000	75500	22400	99000
216W	3.1496	80	0.0006	0.015	5.5118	140	0.0007	0.018	1.0236	26	0.006	0.15	0.079	2.0	3.60	1.633	20400	90600	26000	114000
217W	3.3465	85	0.0008	0.020	5.9055	150	0.0007	0.018	1.1024	28	0.008	0.20	0.079	2.0	4.45	2.019	22400	96000	29000	129000
218W	3.5433	90	0.0008	0.020	6.2992	160	0.0010	0.025	1.1811	30	0.008	0.20	0.079	2.0	5.49	2.49	25500	96500	33500	149000
219W	3.7402	95	0.0008	0.020	6.6929	170	0.0010	0.025	1.2598	32	0.008	0.20	0.079	2.0	6.70	3.039	29000	112000	38000	169000
220W	3.9370	100	0.0008	0.020	7.0866	180	0.0010	0.025	1.3386	34	0.008	0.20	0.080	2.0	8.09	3.67	33500	127000	42500	188000
221W	4.1339	105	0.0008	0.020	7.4803	190	0.0012	0.030	1.4173	36	0.008	0.20	0.080	2.0	9.43	4.277	35500	134000	44000	195000
222W	4.3307	110	0.0008	0.020	7.8740	200	0.0012	0.030	1.4961	38	0.008	0.20	0.080	2.0	11.34	5.144	42500	160000	50000	222000
224W3	4.7244	120	0.0008	0.020	8.4646	215	0.0012	0.030	1.5748	40	0.010	0.25	0.080	2.0	14.52	6.586	41500	156000	50000	222000
226W3	5.1181	130	0.0010	0.020	9.0551	230	0.0012	0.030	1.5748	40	0.010	0.25	0.120	3.0	16.80	7.62	53000	196000	58500	260000
228W3	5.5118	140	0.0010	0.025	9.8425	250	0.0012	0.030	1.6535	42	0.010	0.25	0.120	3.0	20.50	9.3	58500	260000	61000	270000
230W	5.9055	150	0.0010	0.025	10.6299	270	0.0014	0.035	1.7717	45	0.010	0.25	0.120	3.0	27.50	12.5	65500	290000	67000	300000
232W	6.2992	160	0.0010	0.025	11.4173	290	0.0014	0.035	1.8898	48	0.010	0.25	0.120	3.0	34.00	15.4	76500	340000	73500	325000
234W	6.6929	170	0.0010	0.025	12.2047	310	0.0014	0.035	2.0472	52	0.010	0.25	0.160	4.0	42.00	19	85000	375000	78000	345000
236W	7.0866	180	0.0010	0.025	12.5984	320	0.0016	0.040	2.0472	52	0.010	0.25	0.160	4.0	43.80	19.9	90000	405000	81500	365000
238W	7.4803	190	0.0012	0.030	13.3858	340	0.0016	0.040	2.1654	55	0.012	0.30	0.160	4.0	52.00	23.6	104000	465000	91500	405000
240W	7.8740	200	0.0012	0.030	14.1732	360	0.0016	0.040	2.2835	58	0.012	0.30	0.160	4.0	59.80	27.1	125000	560000	106000	465000
242W	8.2677	210	0.0012	0.030	14.9606	380	0.0016	0.040	2.4016	61	0.012	0.30	0.160	4.0	73.30	33.2	129000	570000	104000	465000
244W	8.6614	220	0.0012	0.030	15.7480	400	0.0016	0.040	2.5591	65	0.012	0.30	0.160	4.0	83.90	38.1	153000	680000	120000	530000
246W	9.0551	230	0.0012	0.030	16.5354	420	0.0018	0.045	2.6772	68	0.012	0.30	0.160	4.0	100.70	45.6	156000	695000	118000	530000
248W	9.4488	240	0.0012	0.030	17.3228	440	0.0018	0.045	2.8346	72	0.012	0.30	0.160	4.0	107.40	48.7	193000	865000	143000	640000
250W	9.8425	250	0.0012	0.030	18.1102	460	0.0018	0.045	2.9921	76	0.012	0.30	0.160	4.0	126.80	57.5	208000	930000	150000	670000
252W	10.2362	260	0.0014	0.035	18.8976	480	0.0018	0.045	3.1496	80	0.014	0.35	0.200	5.0	144.20	65.4	232000	1020000	160000	720000
256W	11.0236	280	0.0014	0.035	19.6850	500	0.0018	0.045	3.1496	80	0.014	0.35	0.200	5.0	147.40	66.8	255000	1120000	170000	765000
260W	11.8110	300	0.0014	0.035	21.2598	540	0.0020	0.050	3.3465	85	0.014	0.35	0.200	5.0	198.00	89.8	245000	1100000	160000	720000
264W	12.5984	320	0.0016	0.040	22.8346	580	0.0020	0.050	3.6220	92	0.016	0.40	0.200	5.0	219.10	99.3	355000	1560000	216000	965000

⁽¹⁾ Maximum shaft or housing fillet radius which bearing corners will clear.








⁽²⁾ These sizes have molded nylon cages.

*For applications where thrust load exceeds 60% of radial load consult The Torrington Company.

Listed in the table below are Torrington's maximum capacity type bearings (200W series) with shields, seals and snap ring combinations. The bearing number suffixes denote the following:

- WD** - filling slot opposite single shield
- WNP** - filling slot opposite single seal
- WG** - filling slot opposite snap ring
- WDD** - two shields
- WNPP** - two seals
- WDG** - filling slot and snap ring opposite shield
- WDDG** - two shields with filling slot opposite snap ring

SHIELDS, SEALS AND SNAP RING COMBINATIONS

Shields and Seals				Snap Ring (Wireloc) ⁽¹⁾			Snap Ring (Wireloc) ⁽¹⁾					
							O.D.		Thickness		Offset	
One Shield D	Two Shields DD	One Seal P	Two Seals PP	Open Type G	One Shield DG	Two Shields DDG	in.	mm	in.	mm	in.	mm
—	—	—	—	—	—	—	—	—	—	—	—	—
204WD	—	—	—	204WG	—	—	2 1/16	52.4	0.042	1.07	0.136	3.45
205WD	—	—	—	205WG	—	—	2 11/64	57.5	0.042	1.07	0.136	3.45
206WD	—	—	—	206WG	206WDG	—	2 21/32	67.5	0.065	1.65	0.190	4.83
207WD	—	—	—	207WG	207WDG	—	3 1/64	78.2	0.065	1.65	0.190	4.83
208WD	208WDD	—	—	208WG	208WDG	208WDDG	3 13/32	86.5	0.065	1.65	0.190	4.83
209WD	209WDD	—	—	209WG	209WDG	—	3 19/32	91.3	0.065	1.65	0.190	4.83
210WD	210WDD	—	—	210WG	210WDG ⁽²⁾	—	3 31/64	96.4	0.095	2.41	0.220	5.59
211WD	211WDD	—	—	211WG ⁽³⁾	211WDG	—	4 3/16	106.4	0.095	2.41	0.220	5.59
212WD	212WDD	—	—	212WG	212WDG	212WDDG	4 31/64	116.3	0.095	2.41	0.220	5.59
213WD	213WDD	213WNP	213WNPP	213WG	213WDG	213WDDG	5 1/32	129.4	0.109	2.77	0.265	6.73
214WD	214WDD	—	—	214WG	214WDG	—	5 19/64	134.5	0.109	2.77	0.265	6.73
215WD	215WDD	215WNP	215WNPP	215WG	215WDG	215WDDG	5 1/2	139.7	0.109	2.77	0.265	6.73
216WD	216WDD	—	—	216WG	216WDG	—	5 57/64	149.6	0.109	2.77	0.297	7.54
217WD	217WDD	—	—	217WG	217WDG	—	6 1/32	159.5	0.109	2.77	0.297	7.54
218WD	218WDD	218WNP	—	218WG	—	—	6 43/64	169.5	0.109	2.77	0.297	7.54
219WD	219WDD	—	—	—	—	—	—	—	—	—	—	—
220WD	220WDD	—	—	220WG	—	—	7 19/32	192.9	0.12	3.05	0.339	8.61
221WD	—	—	—	—	—	—	—	—	—	—	—	—
222WD	—	—	—	—	—	—	—	—	—	—	—	—
224WD ⁽⁴⁾	—	—	—	—	—	—	—	—	—	—	—	—

(1) The snap ring is normally packaged separately in the box with the bearing.
 (2) Also available as a GWD type-filling slot opposite the shield and snap ring.
 (3) Also available as 211GW with filling slot on same side as snap ring.
 (4) Width is 1.6535" for the 224WD bearing.



Light 200 Series Extra Width Inner Ring

The 200 Series, extra width inner ring type has sizes available both in the rubber seal (P) and Mechani-Seal (L) design.

A distinguishing feature of this series is the extra width inner ring which provides greater shaft support. The "P" seal version utilizes a Buna N rubber contact seal whereas the "L" seal employs a frictionless metallic member to form a labyrinth.

These bearings are used extensively in high speed pneumatic tools, small pumps, electric motors, domestic appliances, etc.

These bearings are electric motor quality for applications where extra quietness is a requirement.

DIMENSIONS – TOLERANCES

Bearing Number		Bore d				Outside Diameter D				Width B ₁		Inner Ring Offset		Ring Widths +0.000", -0.005" 0.00", -0.12mm				Fillet Radius ⁽¹⁾		Wt.		Static Load Rating C ₀		Extended Dynamic Load Rating C _E	
one seal L	one seal and shield LD	tolerance +0.0000"		+0.000 mm to minus		tolerance +0.0000"		+0.000 mm to minus		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg.	lbs.	N	lbs.	N
		in.	mm	in.	mm	in.	mm	in.	mm																
200KL	200KLD	0.3937	10	0.0003	0.008	1.1811	30	0.00035	0.009	0.500	12.70	0.020	0.51	0.480	12.19	0.354	8.99	0.024	0.6	0.08	0.036	585	2650	1530	6550
201KL	201KLD	0.4724	12	0.0003	0.008	1.2598	32	0.00045	0.011	0.500	12.70	0.020	0.51	0.480	12.19	0.394	10.01	0.024	0.6	0.09	0.041	680	3000	1730	7500
—	201KLD2	0.5118	13	0.0003	0.008	1.2598	32	0.00045	0.011	0.500	12.70	0.020	0.51	0.480	12.19	0.394	10.01	0.024	0.6	0.09	0.041	680	3000	1730	7500
201KL3	—	0.4358	11.07	0.0003	0.008	1.2598	32	0.00045	0.011	0.500	12.70	0.020	0.51	0.480	12.19	0.394	10.01	0.024	0.6	0.09	0.041	680	3000	1730	7500
202KL4	202KLD4	0.5512	14	0.0003	0.008	1.3780	35	0.00045	0.011	0.500	12.70	0.020	0.51	0.480	12.19	0.433	11.00	0.024	0.6	0.10	0.045	830	3690	1930	8650
202KL	202KLD	0.5906	15	0.0003	0.008	1.3780	35	0.00045	0.011	0.500	12.70	0.020	0.51	0.480	12.19	0.433	11.00	0.024	0.6	0.10	0.045	830	3450	1930	8650
202KL3	202KLD3	0.6299	16	0.0003	0.008	1.3780	35	0.00045	0.011	0.500	12.70	0.020	0.51	0.480	12.19	0.433	11.00	0.024	0.6	0.10	0.045	830	3450	1930	8650
203KL	203KLD	0.6693	17	0.0003	0.008	1.5748	40	0.00045	0.011	0.563	14.30	0.025	0.64	0.538	13.67	0.472	11.99	0.024	0.6	0.16	0.073	1060	4700	2450	10800
204KL	204KLD	0.7874	20	0.0004	0.010	1.8504	47	0.00045	0.011	0.625	15.88	0.025	0.64	0.600	15.24	0.551	14.00	0.039	1.0	0.25	0.113	1460	6200	3200	14300
205KL	205KLD	0.9843	25	0.0004	0.010	2.0472	52	0.0005	0.013	0.625	15.88	0.025	0.64	0.600	15.24	0.591	15.01	0.039	1.0	0.29	0.132	1760	7800	3600	16000
206KL	206KLD	1.1811	30	0.0004	0.010	2.4409	62	0.0005	0.013	0.787	20.00	0.039	0.99	0.748	19.00	0.630	16.00	0.039	1.0	0.51	0.231	2550	10000	5000	22200
207KL	207KLD	1.3780	35	0.00045	0.012	2.8346	72	0.0005	0.013	0.827	21.00	0.039	0.99	0.787	20.00	0.669	17.00	0.039	1.0	0.71	0.322	3450	13700	6550	29000
209KL	209KLD	1.7717	45	0.00045	0.012	3.3465	85	0.0006	0.015	1.024	26.00	—	—	1.024	26.00	0.748	19.00	0.039	1.0	1.12	0.508	4550	17600	8300	37000
211KL	211KLD	2.1654	55	0.0006	0.015	3.9370	100	0.0006	0.015	1.063	27.00	—	—	1.063	27.00	0.827	21.01	0.059	1.5	1.65	0.748	6550	29100	11000	49000

DIMENSIONS – TOLERANCES

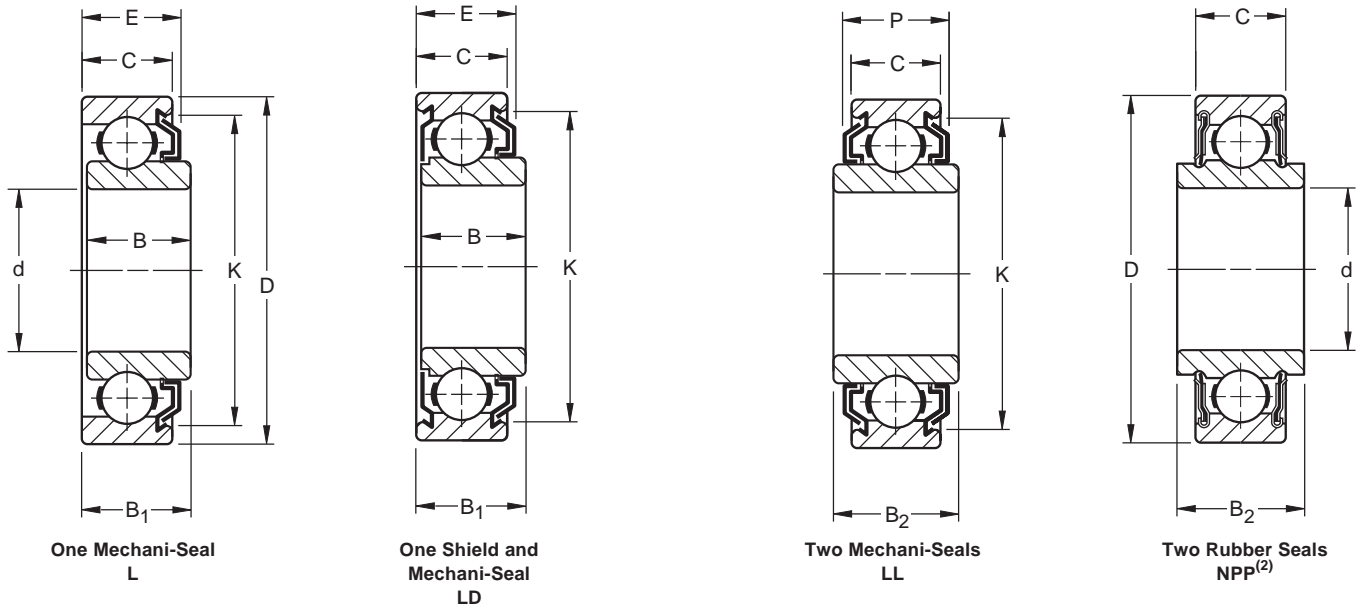
Bearing Number		Bore d				Outside Diameter D				Ring Widths +0.000, -0.005" +0.00, -0.12 mm				Fillet Radius ⁽¹⁾		Wt		Static Load Rating C ₀		Extended Dynamic Load Rating C _E	
two seals LL	two seals NPP	tolerance +0.0000"		+0.000 mm to minus		tolerance +0.0000"		+0.000 mm to minus		in.	mm	in.	mm	in.	mm	lbs.	kg.	lbs.	N	lbs.	N
		in.	mm	in.	mm	in.	mm	in.	mm												
200KLL2	200KRR3 ⁽⁴⁾	0.3937	10	0.0003	0.008	1.1811	30	0.00035	0.009	0.646	16.40	0.354	8.99	0.024	0.6	0.08	0.036	585	2650	1530	6800
201KLL2	—	0.4724	12	0.0003	0.008	1.2598	32	0.00045	0.011	0.606	15.40	0.394	10.01	0.024	0.6	0.09	0.041	680	3000	1700	7500
201KLL3	—	0.5118	13	0.0003	0.008	1.2598	32	0.00045	0.011	0.606	15.40	0.394	10.01	0.024	0.6	0.09	0.041	680	3000	1700	7500
202KLL2	—	0.5906	15	0.0003	0.008	1.3780	35	0.00045	0.011	0.567	14.40	0.433	11.00	0.024	0.6	0.10	0.045	830	3690	1930	8650
202KLL3	202NPP11	0.6299	16	0.0003	0.008	1.3780	35	0.00045	0.011	0.567	14.40	0.433	11.00	0.024	0.6	0.10	0.045	830	3690	1930	8650
203KLL2 ⁽²⁾	203NPP8	0.6693	17	0.0003	0.008	1.5748	40	0.00045	0.011	0.654	16.60	0.472	11.99	0.024	0.6	0.16	0.073	1060	4700	2450	10800
204KLL2	204NPP7	0.7874	20	0.0004	0.010	1.8504	47	0.00045	0.011	0.699	17.75	0.551	14.00	0.039	1.0	0.25	0.113	1460	6200	3200	14300
205KLL2 ⁽³⁾	205NPP2	0.9843	25	0.0004	0.010	2.0472	52	0.0005	0.013	0.659	16.75	0.591	15.01	0.039	1.0	0.29	0.132	1760	7800	3600	16000
206KLL	206NPP2	1.1811	30	0.0004	0.010	2.4409	62	0.0005	0.013	0.945	24.00	0.630	16.00	0.039	1.0	0.51	0.231	2550	11300	5000	22200
207KLL	—	1.3780	35	0.00045	0.012	2.8346	72	0.0005	0.013	0.984	25.00	0.669	17.00	0.039	1.0	0.71	0.322	3450	15300	6550	29000
208KLL	—	1.5748	40	0.00045	0.012	3.1496	80	0.0005	0.013	1.188	30.18	0.709	18.01	0.039	1.0	1.02	0.463	4550	20200	8150	36000
209KLL	—	1.7717	45	0.00045	0.012	3.3465	85	0.0006	0.015	1.181	30.00	0.748	19.00	0.039	1.0	1.12	0.508	4550	20200	8300	37000

⁽¹⁾ Maximum shaft or housing fillet radius which bearing corners will clear.

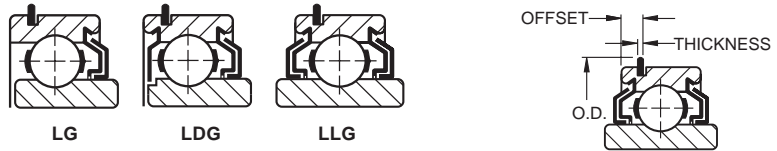
⁽²⁾ Also available as 203KLL with .718" (18.24mm) inner ring width.

⁽³⁾ Also available as 205KLL with .812" (20.64mm) inner ring width.

⁽⁴⁾ Equipped with "R" seals.



MECHANI-SEAL SNAP RING COMBINATIONS



(Seal Projection) (L, LD, LL Types Only)					One Mechani-Seal One Mechani-Seal and Shield Two Mechani-Seals			Snap Ring ⁽¹⁾						
Width		P		O.D. K		LG	LDG	LLG	O.D.		Thickness		Offset	
in.	mm	in.	mm	in.	mm				in.	mm	in.	mm	in.	mm
0.481	12.22	0.613	15.57	1	25.4	—	—	200KLLG2	1 23/64	34.5	0.042	1.07	0.120	3.05
0.480	12.19	0.567	14.40	1 1/16	27.0	—	—	201KLLG2	1 7/16	36.5	0.042	1.07	0.120	3.05
0.480	12.19	0.567	14.40	1 1/16	27.0	—	201KLDG3	—	1 7/16	36.5	0.042	1.07	0.120	3.05
0.487	12.37	0.543	13.79	1 3/16	30.2	—	202KLDG	202KLLG2	1 35/64	39.3	0.042	1.07	0.120	3.05
0.487	12.37	0.543	13.79	1 3/16	30.2	—	—	202KLLG3	1 35/64	39.3	0.042	1.07	0.120	3.05
0.551	14.00	0.630	16.00	1 3/8	34.9	203KLG	—	203KLLG2	1 3/4	44.4	0.042	1.07	0.120	3.05
0.613	15.57	0.675	17.14	1 37/64	40.1	204KLG2	—	204KLLG2	2 1/16	52.4	0.042	1.07	0.136	3.45
0.613	15.57	0.635	16.13	1 51/64	45.6	205KLG2	—	205KLLG2	2 17/64	57.5	0.042	1.07	0.136	3.45
0.767	19.48	0.905	22.99	2 3/64	54.4	—	—	206KLLG	2 27/32	67.5	0.065	1.65	0.190	4.83
0.807	20.50	0.944	23.98	2 15/32	62.7	—	—	207KLLG	3 3/64	78.2	0.065	1.65	0.190	4.83
0.918	23.32	1.127	28.63	2 3/4	69.8	—	—	—	3 13/32	86.5	0.065	1.65	0.190	4.83
0.954	24.23	1.160	29.46	2 31/32	75.4	—	—	209KLLG	3 19/32	91.3	0.065	1.65	0.190	4.83

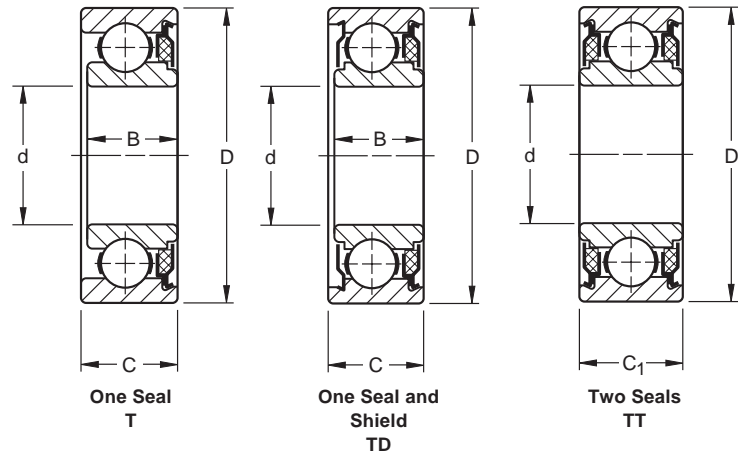
⁽¹⁾ The snap ring is normally packaged separately in the box with the bearing.
⁽²⁾ "N" prefix indicates a non-removable seal.



Light 200 Series Felt Seal Type

The felt seal type ball bearing permits certain design economies, but cannot be assumed to be suitable for all conditions of service. In many cases it is supplemented by other parts for really adequate bearing protection in small equipment such as fractional horsepower motors, electric vacuum cleaners, small gear units, electric and pneumatic tools, etc. Felt seal bearings are recommended for effective grease retention and exclusion of foreign matter.

These bearings are electric motor quality for applications where extra quietness is a requirement.



DIMENSIONS – TOLERANCES

one seal T	one seal and shield TD	Bore d				Outside Diameter D				Ring Widths 0.000", -0.005" 0.000", -0.12 mm				Inner Ring Offset		Fillet Radius ⁽¹⁾		Wt.		Static Load Rating C ₀		Extended Dynamic Load Rating C _E			
		tolerance +0.0000" +0.000 mm to minus				tolerance +0.0000" +0.000 mm to minus				inner B	outer C					lbs.	kg	lbs.	N	lbs.	N				
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg	lbs.	N	lbs.	N
200KT	200KTD	0.3937	10	0.0003	0.008	1.1811	30	0.00035	0.009	0.480	12.19	0.500	12.70	0.020	0.51	0.024	0.6	0.10	0.045	585	2600	1530	6790		
—	200KTD2	0.4724	12	0.0003	0.008	1.1811	30	0.00035	0.009	0.480	12.19	0.500	12.70	0.020	0.51	0.024	0.6	0.10	0.045	585	2600	1530	6790		
201KT	201KTD	0.4724	12	0.0003	0.008	1.2598	32	0.00045	0.011	0.480	12.19	0.500	12.70	0.020	0.51	0.024	0.6	0.10	0.045	680	3000	1730	7680		
201KT2	201KTD2	0.5118	13	0.0003	0.008	1.2598	32	0.00045	0.011	0.480	12.19	0.500	12.70	0.020	0.51	0.024	0.6	0.10	0.045	680	3000	1730	7680		
202KT	202KTD	0.5906	15	0.0003	0.008	1.3780	35	0.00045	0.011	0.480	12.19	0.500	12.70	0.020	0.51	0.024	0.6	0.11	0.05	830	3600	1930	8650		
202KT3 ⁽²⁾	202KTD3 ⁽²⁾	0.6299	16	0.0003	0.008	1.3780	35	0.00045	0.011	0.480	12.19	0.500	12.70	0.020	0.51	0.024	0.6	0.11	0.05	830	3600	1930	8650		
203KT	203KTD	0.6693	17	0.0003	0.008	1.5748	40	0.00045	0.011	0.538	13.67	0.563	14.30	0.025	0.64	0.024	0.6	0.17	0.077	1060	4700	2450	10900		
204KT	204KTD	0.7874	20	0.0004	0.010	1.8504	47	0.00045	0.011	0.600	15.24	0.625	15.88	0.025	0.64	0.039	1.0	0.26	0.118	1460	6500	3250	14400		
205KT	205KTD	0.9843	25	0.0004	0.010	2.0472	52	0.0005	0.013	0.600	15.24	0.625	15.88	0.025	0.64	0.039	1.0	0.29	0.132	1760	7800	3600	16000		
206KT	206KTD	1.1811	30	0.0004	0.010	2.4409	62	0.0005	0.013	0.748	19.00	0.788	19.99	0.039	0.99	0.039	1.0	0.54	0.245	2550	11300	5000	22200		
207KT	207KTD	1.378	35	0.00045	0.012	2.8346	72	0.0005	0.013	0.787	19.99	0.827	21.01	0.039	0.99	0.039	1.0	0.79	0.358	3450	15300	6550	29000		

⁽¹⁾ Maximum shaft or housing fillet radius which bearing corners will clear.

⁽²⁾ 202KT3 has .484" (12.29mm) inner ring width.

DIMENSIONS – TOLERANCES

two seals TT	Bore d				Outside Diameter D				Ring Widths +0.000" -0.005" +0.00 mm -0.12 mm		Fillet Radius ⁽¹⁾		Wt.		Static Load Rating C ₀		Extended Dynamic Load Rating C _E			
	tolerance +0.0000" +0.000 mm to minus				tolerance +0.0000" +0.000 mm to minus				C ₁					lbs.	kg	lbs.	N	lbs.	N	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg	lbs.	N	lbs.	N
200KTT	0.3937	10	0.0003	0.008	1.1811	30	0.00035	0.009	0.656	16.66	0.024	0.6	0.10	0.045	585	2600	1530	6790		
201KTT	0.4724	12	0.0003	0.008	1.2598	32	0.00045	0.011	0.656	16.66	0.024	0.6	0.10	0.045	680	3000	1730	7680		
201KTT3	0.5118	13	0.0003	0.008	1.2598	32	0.00045	0.011	0.656	16.66	0.024	0.6	0.10	0.045	680	3000	1730	7680		
202KTT	0.5906	15	0.0003	0.008	1.3780	35	0.00045	0.011	0.656	16.66	0.024	0.6	0.11	0.050	830	3600	1930	8650		
203KTT	0.6693	17	0.0003	0.008	1.5748	40	0.00045	0.011	0.718	18.24	0.024	0.6	0.17	0.077	1060	4700	2450	10900		
204KTT	0.7874	20	0.0004	0.010	1.8504	47	0.00045	0.011	0.812	20.62	0.039	1.0	0.26	0.118	1460	6500	3250	14400		
205KTT	0.9843	25	0.0004	0.010	2.0472	52	0.0005	0.013	0.812	20.62	0.039	1.0	0.29	0.132	1760	7800	3600	16000		
206KTT	1.1811	30	0.0004	0.010	2.4409	62	0.0005	0.013	0.945	24.00	0.039	1.0	0.54	0.245	2550	11300	5000	22200		
207KTT	1.3780	35	0.00045	0.012	2.8346	72	0.0005	0.013	0.984	25.00	0.039	1.0	0.79	0.358	3450	15300	6550	29000		

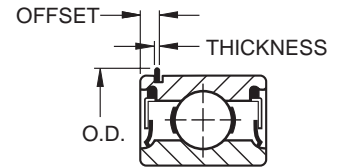
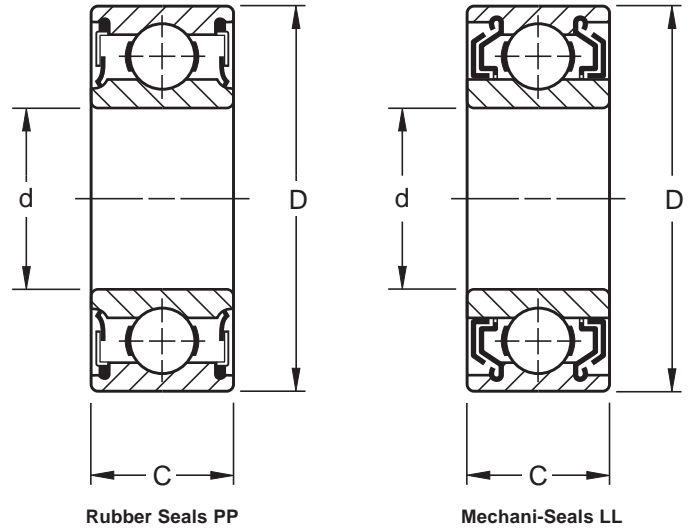
⁽¹⁾ Maximum shaft or housing fillet radius which bearing corners will clear.



Light, Wide Type W200PP Series W200KLL Series

Fafnir wide type ball bearings, both rubber seal (W200PP) and Mechani-Seal (W200KLL) types, are made with standard bores and outside diameters and a single row of balls, but they have the same widths as double row bearings of corresponding size. The extra width offers a larger support area for shaft and housing contact and added space for the pre-packed lubricant. The wide type rubber seal bearings are particularly adapted for use in electric motors where they simplify housing design by eliminating auxiliary seals.

The wide type Mechani-Seal ball bearings (W200KLL) are designed for applications where frictionless sealing and large grease capacity are required. Extremely effective grease retention and exclusion of foreign matter are assured by the close running clearance between the seal members and the slinger action of the outer member.



DIMENSIONS — TOLERANCES

Bearing Number	Bore d	Outside Diameter D		Width C		Fillet Radius ⁽¹⁾	Wt.	Static Load Rating C ₀	Extended Dynamic Load Rating C _E	Snap Ring PPG ⁽³⁾															
										tolerance +0.0000* +0.000 mm to minus		tolerance +0.0000* +0.000 mm to minus		+0.000* -.005* +0.00 mm -.12 mm		O.D.		thickness		offset					
Contact Seal PP	Mechani-seal LL	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg	lbs.	N	lbs.	N	in.	mm	in.	mm	in.	mm				
W200PP	—	0.3937	10	0.0003	0.008	1.1811	30	0.00035	0.009	0.562	14.27	0.024	0.6	0.10	0.045	600	2650	1500	6550	—	—	—	—	—	—
W201PP	—	0.4724	12	0.0003	0.008	1.2598	32	0.00045	0.011	0.625	15.88	0.024	0.6	0.12	0.054	695	3000	1700	7500	—	—	—	—	—	—
W202PP	—	0.5906	15	0.0003	0.008	1.3780	35	0.00045	0.011	0.625	15.88	0.024	0.6	0.14	0.064	780	3450	1930	8650	—	—	—	—	—	—
W203PP ⁽²⁾	—	0.6693	17	0.0003	0.008	1.5748	40	0.00045	0.011	0.688	17.48	0.024	0.6	0.20	0.091	1000	4400	2360	10600	1 1/4	44.4	0.042	1.07	0.185	4.7
W204PP	W204KLL	0.7874	20	0.0004	0.010	1.8504	47	0.00045	0.011	0.812	20.62	0.039	1.0	0.33	0.150	1400	6200	3200	14300	—	—	—	—	—	—
W205PP ⁽²⁾	W205KLL	0.9843	25	0.0004	0.010	2.0472	52	0.0005	0.013	0.812	20.62	0.039	1.0	0.39	0.177	1560	6950	3450	15600	2 1/4	57.5	0.042	1.07	0.225	5.72
W206PP ⁽²⁾	W206KLL	1.1811	30	0.0004	0.010	2.4409	62	0.0005	0.013	0.938	23.83	0.039	1.0	0.65	0.295	2280	10000	4800	21600	2 1/2	67.5	0.065	1.65	0.242	6.15
W207PP	W207KLL	1.3780	35	0.00045	0.012	2.8346	72	0.0005	0.013	1.062	26.97	0.039	1.0	1.01	0.458	3050	13700	6400	28500	—	—	—	—	—	—
W208PP	W208KLL	1.5748	40	0.00045	0.012	3.1496	80	0.0005	0.013	1.188	30.18	0.039	1.0	1.39	0.630	4000	17600	8150	36000	—	—	—	—	—	—
W209PP	W209KLL	1.7717	45	0.00045	0.012	3.3465	85	0.0006	0.015	1.188	30.18	0.039	1.0	1.47	0.668	4000	17600	8150	36000	—	—	—	—	—	—
W210PP	—	1.9685	50	0.00045	0.012	3.5433	90	0.0006	0.015	1.188	30.18	0.039	1.0	1.69	0.767	4500	19600	8800	39000	—	—	—	—	—	—
W214PP	—	2.7559	70	0.0006	0.015	4.9213	125	0.0007	0.018	1.562	39.67	0.059	1.5	3.99	1.810	8500	37500	15600	69500	—	—	—	—	—	—

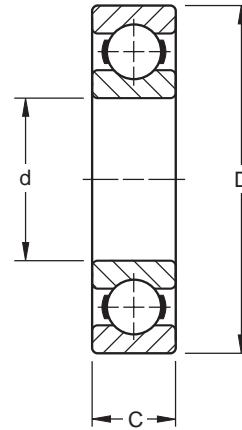
⁽¹⁾ Maximum shaft or housing fillet radius which bearing corners will clear.
⁽²⁾ Also available with snap ring. To order, add suffix "G" to bearing number. Example: W205PPG.
⁽³⁾ The snap ring is normally packaged separately in the box with the bearing.



Medium 300K Series

The Fafnir 300 series ball bearings have a heavier cross-section than the 200 series and are therefore capable of carrying considerably heavier radial, thrust and combined loads for a given bore size. As this series is also capable of withstanding heavy shock loads, rarely is a ball bearing of heavier cross-section required.

The 300K series, Conrad-type bearing is well balanced with deep races and uninterrupted race shoulders. These bearings are electric motor quality where extra quietness is a requirement.



DIMENSIONS – TOLERANCES

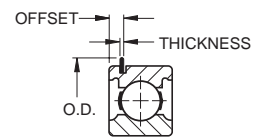
Bearing Number	Bore d				Outside Diameter				Width C				Fillet Radius ⁽¹⁾		Wt.		Static Load C ₀		Extended Dynamic Rating C _E	
	tolerance +0.0000* +0.000 mm to minus				tolerance +0.0000* +0.000 mm to minus				tolerance +0.000* +0.00 mm to minus											
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg	lbs.	N	lbs.	N
300K	0.3937	10	0.0003	0.008	1.378	35	0.00045	0.011	0.433	11	0.005	0.12	0.024	0.6	0.12	0.054	780	3460	2080	9200
301K	0.4724	12	0.0003	0.008	1.4567	37	0.00045	0.011	0.472	12	0.005	0.12	0.039	1.0	0.14	0.064	815	3620	2120	9400
302K	0.5906	15	0.0003	0.008	1.6535	42	0.00045	0.011	0.512	13	0.005	0.12	0.039	1.0	0.18	0.082	1180	5240	3000	13300
303K	0.6693	17	0.0003	0.008	1.8504	47	0.00045	0.011	0.551	14	0.005	0.12	0.039	1.0	0.24	0.109	1460	6550	3450	15300
304K	0.7874	20	0.0004	0.010	2.0472	52	0.0005	0.013	0.591	15	0.005	0.12	0.039	1.0	0.31	0.141	1760	7800	4050	17900
305K	0.9843	25	0.0004	0.010	2.4409	62	0.0005	0.013	0.669	17	0.005	0.12	0.039	1.0	0.52	0.236	2750	12200	6000	26600
306K	1.1811	30	0.0004	0.010	2.8346	72	0.0005	0.013	0.748	19	0.005	0.12	0.039	1.0	0.78	0.354	3550	15600	7650	33900
307K	1.3780	35	0.00045	0.012	3.1496	80	0.0005	0.013	0.827	21	0.005	0.12	0.059	1.5	1.04	0.472	4150	18400	8500	37700
308K	1.5748	40	0.00045	0.012	3.5433	90	0.0006	0.015	0.906	23	0.005	0.12	0.059	1.5	1.42	0.644	5850	25900	11400	50600
309K	1.7717	45	0.00045	0.012	3.9370	100	0.0006	0.015	0.984	25	0.005	0.12	0.059	1.5	1.9	0.862	7100	31500	13400	59500
310K	1.9685	50	0.00045	0.012	4.3307	110	0.0006	0.015	1.063	27	0.005	0.12	0.079	2.0	2.48	1.125	8500	37700	15600	69300
311K	2.1654	55	0.0006	0.015	4.7244	120	0.0006	0.015	1.142	29	0.006	0.15	0.079	2.0	3.14	1.424	10000	44400	18300	81200
312K	2.3622	60	0.0006	0.015	5.1181	130	0.0007	0.018	1.22	31	0.006	0.15	0.079	2.0	3.89	1.765	11600	51500	20800	92300
313K	2.5591	65	0.0006	0.015	5.5118	140	0.0007	0.018	1.299	33	0.006	0.15	0.079	2.0	4.78	2.168	13400	59500	23600	104000
314K	2.7559	70	0.0006	0.015	5.9055	150	0.0010	0.025	1.378	35	0.006	0.15	0.079	2.0	5.77	2.617	15300	67900	26000	116000
315K	2.9528	75	0.0006	0.015	6.2992	160	0.0007	0.018	1.457	37	0.006	0.15	0.079	2.0	7	3.175	17300	76800	29000	128000
316K	3.1496	80	0.0006	0.015	6.6929	170	0.0010	0.025	1.535	39	0.006	0.15	0.079	2.0	8.28	3.756	19300	85700	31500	139000
317K	3.3465	85	0.0008	0.020	7.0866	180	0.0010	0.025	1.614	41	0.008	0.20	0.098	2.5	11.04	5.008	21600	95900	34000	151000
318K	3.5433	90	0.0008	0.020	7.4803	190	0.0012	0.030	1.693	43	0.008	0.20	0.098	2.5	11.29	5.121	24000	106000	36500	162000
320K	3.9370	100	0.0008	0.020	8.4646	215	0.0012	0.030	1.8504	47	0.008	0.20	0.098	2.5	15.62	7.085	31500	139000	41500	195000
321K	4.1339	105	0.0008	0.020	8.8583	225	0.0012	0.030	1.9291	49	0.008	0.20	0.098	2.5	22.52	10.21	36500	163000	48000	126000
322K	4.3307	110	0.0008	0.020	9.4488	240	0.0012	0.030	1.9685	50	0.008	0.20	0.098	2.5	26.82	12.17	37500	166000	49000	220000
326K	5.1181	130	0.0010	0.020	11.0236	280	0.0014	0.035	2.3228	58	0.01	0.25	0.098	2.5	41.6	18.9	54000	240000	63000	280000
330K	5.9055	150	0.001	0.025	12.5984	320	0.0016	0.040	2.559	65	0.01	0.25	0.098	2.5	59.7	27.1	69500	310000	75000	335000
332K	6.2992	160	0.0010	0.025	13.3858	340	0.0016	0.040	2.677	68	0.01	0.25	0.098	2.5	69.4	31.5	69500	310000	75000	335000
334K	6.6929	170	0.0010	0.025	14.1732	360	0.0016	0.040	2.8346	72	0.01	0.25	0.098	2.5	81.1	36.8	80000	355000	81500	360000
336K	7.0866	180	0.0010	0.025	14.9606	380	0.0016	0.040	2.9528	75	0.01	0.25	0.098	2.5	92.6	42	88000	390000	88000	390000
338K	7.4803	190	0.0012	0.030	15.7480	400	0.0016	0.040	3.0709	78	0.012	0.30	0.16	4.0	105	47.6	98000	440000	95000	425000
340K	7.8740	200	0.0012	0.030	16.5354	420	0.0018	0.045	3.1496	80	0.012	0.30	0.16	4.0	123.6	56.1	104000	465000	95000	425000
342K	8.2677	210	0.0012	0.030	17.3228	440	0.0018	0.045	3.3071	84	0.012	0.30	0.16	4.0	128.2	58.1	129000	570000	114000	510000
344K	8.6614	220	0.0012	0.030	18.1102	460	0.0018	0.045	3.4646	88	0.012	0.30	0.16	4.0	154	69.8	137000	610000	116000	520000
348K	9.4488	240	0.0012	0.030	19.6850	500	0.0018	0.045	3.7402	95	0.012	0.30	0.16	4.0	178.9	81.1	163000	735000	134000	600000
352K	10.2362	260	0.0014	0.035	21.2598	540	0.0020	0.050	4.0157	102	0.014	0.35	0.16	4.0	217	98.4	190000	850000	150000	670000
356K	11.0236	280	0.0014	0.035	22.8346	580	0.0020	0.050	4.2520	108	0.014	0.35	0.16	4.0	315	142.8	176000	780000	134000	585000

⁽¹⁾ Maximum shaft or housing fillet radius which bearing corners will clear.



SHIELDS, SEALS AND SNAP RING COMBINATIONS

SHIELDS AND SEALS					SNAP RING (WIRELOC)				O.D. Thickness Offset					
One Shield D	Two Shields DD	One Seal P	One Shield And Seal PD	Two Seals PP	Open Type G	One Seal PG	One Shield DG	Two Shields DDG	O.D.		Thickness		Offset	
									in.	mm	in.	mm	in.	mm
300KD	300KDD	300P	—	—	—	—	—	—	1 ³⁵ / ₆₄	39.3	0.042	1.07	0.120	3.05
301KD	301KDD	—	—	—	—	—	—	—	1 ³⁹ / ₆₄	40.9	0.042	1.07	0.120	3.05
302KD	302KDD	—	—	—	—	—	—	—	1 ¹³ / ₁₆	46.0	0.042	1.07	0.120	3.05
303KD	303KDD	303P	—	303PP	303KG	—	—	—	2 ¹ / ₁₆	52.4	0.042	1.07	0.136	3.45
304KD	304KDD	304P	—	304PP	304KG	—	304KDG	304KDDG	2 ¹¹ / ₆₄	57.5	0.042	1.07	0.136	3.45
305KD	305KDD	305P	—	305PP	305KG	—	305KDG	305KDDG	2 ²¹ / ₃₂	67.5	0.065	1.65	0.190	4.83
306KD	306KDD	306P	—	306PP	306KG	—	306KDG	306KDDG	3 ³ / ₆₄	78.2	0.065	1.65	0.190	4.83
307KD	307KDD	307P	—	307PP	307KG	—	307KDG	307KDDG	3 ¹³ / ₃₂	86.5	0.065	1.65	0.190	4.83
308KD	308KDD	308P	—	308PP	308KG	—	308KDG	308KDDG	3 ³¹ / ₆₄	96.4	0.095	2.41	0.220	5.59
309KD	309KDD	309P	—	309PP	309KG	—	309KDG	309KDDG	4 ³ / ₁₆	106.4	0.095	2.41	0.220	5.59
310KD	310KDD	310P	—	310PP	310KG	—	310KDG	310KDDG	4 ³¹ / ₆₄	116.3	0.095	2.41	0.220	5.59
311KD	311KDD	311NP	311NPD	311NPP	311KG	311NPG	—	311KDDG	5 ³ / ₃₂	129.4	0.109	2.77	0.265	6.73
312KD	312KDD	—	—	312NPP	312KG	—	—	312KDDG	5 ¹ / ₂	139.7	0.109	2.77	0.265	6.73
313KD	313KDD	—	—	—	—	—	—	313KDDG	5 ²⁷ / ₆₄	149.6	0.109	2.77	0.297	7.54
314KD	314KDD	—	—	—	—	—	—	—	—	—	—	—	—	—
315KD	315KDD	—	—	—	—	—	—	—	—	—	—	—	—	—
316KD	316KDD	—	—	—	—	—	—	—	—	—	—	—	—	—
317KD	317KDD	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
320KD	320KDD	—	—	—	—	—	—	—	—	—	—	—	—	—



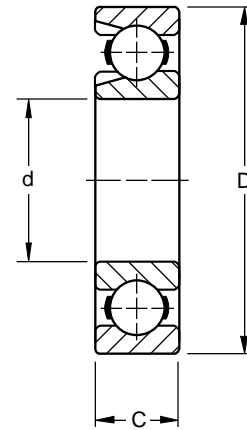
(1) The snap ring is normally packaged separately in the box with the bearing
 Note: "N" prefix indicates a non-removable seal in NP(P) designs.



Medium 300W Series

The Fafnir 300 series ball bearings have a heavier cross-section than the 200 series and are therefore capable of carrying considerably heavier radial, thrust and combined loads for a given bore size. As this series is also capable of withstanding heavy shock loads, rarely is a ball bearing of heavier cross-section required.

The 300W series bearings are dimensionally interchangeable with the 300K series; however, members of the 300W series are capable of carrying heavier radial loads, owing to their larger ball complements.



DIMENSIONS – TOLERANCES

Bearing Number	Bore d				Outside Diameter D				Width C				Fillet Radius ⁽¹⁾	Wt.		Static Load Rating C ₀		Extended Dynamic Load Rating C _E		
	tolerance +0.0000* +0.000 mm to minus				tolerance +0.0000* +0.000 mm to minus				tolerance +0.000* +0.00 mm to minus					lbs.	kg	lbs.	N	lbs.	N	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm						
303W	0.6693	17	0.0003	0.008	1.8504	47	0.00045	0.011	0.551	14	0.005	0.12	0.039	1.0	0.26	0.118	2120	9400	4650	20600
304W	0.7874	20	0.0004	0.010	2.0472	52	0.0005	0.013	0.591	15	0.005	0.12	0.039	1.0	0.34	0.154	2550	11300	5400	23900
305W	0.9843	25	0.0004	0.010	2.4409	62	0.0005	0.013	0.669	17	0.005	0.12	0.039	1.0	0.57	0.259	3900	17300	7650	33900
306W	1.1811	30	0.0004	0.010	2.8346	72	0.0005	0.013	0.748	19	0.005	0.12	0.039	1.0	0.85	0.386	5100	22600	9650	42800
307W	1.3780	35	0.00045	0.012	3.1496	80	0.0005	0.013	0.827	21	0.005	0.12	0.059	1.5	1.13	0.513	6550	29000	11600	51500
308W	1.5748	40	0.00045	0.012	3.5433	90	0.0006	0.015	0.906	23	0.005	0.12	0.059	1.5	1.86	0.844	8000	39000	15000	66000
309W	1.7717	45	0.00045	0.012	3.9370	100	0.0006	0.015	0.984	25	0.005	0.12	0.059	1.5	2.06	0.934	10600	47000	17600	78100
310W	1.9685	50	0.00045	0.012	4.3307	110	0.0006	0.015	1.063	27	0.005	0.12	0.079	2.0	2.66	1.207	12700	56000	20800	92000
311W	2.1654	55	0.0006	0.015	4.7244	120	0.0006	0.015	1.142	29	0.006	0.15	0.079	2.0	3.40	1.542	15000	66000	24000	106000
312W	2.3622	60	0.0006	0.015	5.1181	130	0.0007	0.018	1.220	31	0.006	0.15	0.079	2.0	4.24	1.923	17600	78000	27500	122000
313W	2.5591	65	0.0006	0.015	5.5118	140	0.0007	0.018	1.299	33	0.006	0.15	0.079	2.0	5.32	2.413	21600	96000	32500	144000
314W	2.7559	70	0.0006	0.015	5.9055	150	0.0007	0.018	1.378	35	0.006	0.15	0.079	2.0	6.36	2.885	22800	101000	34500	153000
315W	2.9528	75	0.0006	0.015	6.2992	160	0.0010	0.025	1.457	37	0.006	0.15	0.079	2.0	7.71	3.497	28500	127000	40500	180000
316W	3.1496	80	0.0006	0.015	6.6929	170	0.0010	0.025	1.535	39	0.006	0.15	0.079	2.0	9.15	4.15	32000	142000	44000	195000
317W	3.3465	85	0.0008	0.020	7.0866	180	0.0010	0.025	1.614	41	0.008	0.20	0.098	2.5	10.74	4.872	35500	157000	47500	211000
318W	3.5433	90	0.0008	0.020	7.4803	190	0.0012	0.030	1.693	43	0.008	0.20	0.098	2.5	12.39	5.62	39000	173000	51000	226000
319W	3.7402	95	0.0008	0.02	7.8740	200	0.0012	0.030	1.772	45	0.008	0.20	0.098	2.5	14.36	6.514	43000	191000	54000	239000
320W	3.9370	100	0.0008	0.020	8.4646	215	0.0012	0.030	1.850	47	0.008	0.20	0.098	2.5	17.62	7.992	51000	226000	61000	270000
321W	4.1339	105	0.0008	0.020	8.8583	225	0.0012	0.030	1.929	49	0.008	0.20	0.098	2.5	20.1	9.117	55000	244000	64000	284000
322W	4.3307	110	0.0008	0.020	9.4488	240	0.0012	0.030	1.968	50	0.008	0.20	0.098	2.5	23.84	10.814	60000	266000	68000	302000
324W	4.7244	120	0.0008	0.020	10.2362	260	0.0014	0.035	2.165	55	0.008	0.20	0.098	2.5	33.1	15.014	64000	284000	72000	319000
326W	5.1181	130	0.0010	0.025	11.0236	280	0.0014	0.035	2.3228	58	0.010	0.25	0.098	2.5	43.12	19.56	73500	326000	80000	355000
328W	5.5118	140	0.0010	0.025	11.8110	300	0.0014	0.035	2.441	62	0.010	0.25	0.098	2.5	50.8	23	91500	410000	90000	400000
330W	5.9055	150	0.0010	0.025	12.5984	320	0.0016	0.040	2.559	65	0.010	0.25	0.098	2.5	59.1	26.808	95000	422000	95000	422000
336W	7.0866	180	0.0010	0.025	14.9606	380	0.0016	0.040	3.1102	79	0.010	0.25	0.098	2.5	105.07	47.66	132000	600000	118000	524000
338W	7.4803	190	0.0012	0.030	15.7480	400	0.0016	0.040	3.0709	78	0.012	0.30	0.160	4.0	108.4	49.2	160000	720000	129000	580000
340W	7.8740	200	0.0012	0.030	16.5354	420	0.0018	0.045	3.1496	80	0.012	0.30	0.160	4.0	126.6	57.4	163000	730000	127000	570000
342W	8.2677	210	0.0012	0.030	17.3228	440	0.0018	0.045	3.3071	84	0.012	0.30	0.160	4.0	133.7	60.6	208000	935000	160000	720000
344W	8.6614	220	0.0012	0.030	18.1102	460	0.0018	0.045	3.4646	88	0.012	0.30	0.160	4.0	158.8	72	196000	880000	150000	700000
348W	9.4488	240	0.0012	0.030	19.6850	500	0.0018	0.045	3.7402	95	0.012	0.30	0.160	4.0	187.2	84.9	260000	1200000	186000	850000
352W	10.2362	260	0.0014	0.035	21.2598	540	0.002	0.050	4.0157	102	0.014	0.35	0.160	4.0	227.7	103.3	310000	1400000	208000	950000
356W	11.0236	280	0.0014	0.035	22.8346	580	0.002	0.050	4.2520	108	0.014	0.35	0.160	4.0	323.3	146.6	300000	1350000	190000	855000

⁽¹⁾Maximum shaft or housing fillet radius which bearing corners will clear.

For applications where thrust loads exceeds 60% Radial Load, consult the Torrington Company.



Listed in the table below are Torrington's maximum capacity type bearings (300W series) with shields, seals and snap ring combinations. The bearing number suffixes denote the following:

- WD** – filling slot opposite single shield
- WG** – filling slot opposite snap ring
- WDD** – two shields
- WDG** – filling slot and snap ring opposite shield

SHIELDS, SEALS AND SNAP RING COMBINATIONS

Shields and Seals		Snap Ring (Wireloc) ⁽¹⁾								
One Shield D	Two Shields DD	Open Type G	One Shield DG	Two Shields DDG	O.D.		Thickness		Offset	
					in.	mm	in.	mm	in.	mm
—	—	—	—	—	—	—	—	—	—	—
—	—	304WG	—	—	2 ¹¹ / ₆₄	57.5	0.042	1.07	0.136	3.45
305WD	—	305WG	—	—	2 ²¹ / ₆₄	67.5	0.065	1.65	0.190	4.83
306WD	306WDD	306WG	306WDG	—	3 ⁷ / ₆₄	78.2	0.065	1.65	0.190	4.83
307WD	307WDD	307WG	307WDG	—	3 ¹³ / ₆₄	86.5	0.065	1.65	0.190	4.83
308WD	308WDD	308WG ⁽²⁾	308WDG	—	3 ³¹ / ₆₄	96.4	0.095	2.41	0.220	5.59
309WD	309WDD	309WG	309WDG	—	4 ³ / ₁₆	106.4	0.095	2.41	0.220	5.59
310WD	310WDD	310WG	310WDG	310WDDG	4 ³¹ / ₆₄	116.3	0.095	2.41	0.220	5.59
311WD	311WDD	311WG	311WDG	—	5 ⁷ / ₆₄	129.4	0.109	2.77	0.265	6.73
312WD	312WDD	312WG ⁽³⁾	312WDG	312WDDG	5 ¹ / ₂	139.7	0.109	2.77	0.265	6.73
313WD	313WDD	313WG	313WDG	313WDDG	5 ⁵ / ₆₄	149.6	0.109	2.77	0.297	7.54
314WD	314WDD	—	—	—	—	—	—	—	—	—
315WD	315WDD	—	—	—	—	—	—	—	—	—
316WD	316WDD	316WG	—	—	7 ³ / ₁₆	182.6	0.120	3.05	0.339	8.61
317WD	317WDD	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
320WD	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	322WG	—	—	9 ³ / ₆₄	252.8	0.120	3.05	0.339	8.61

⁽¹⁾ The snap ring is normally packaged separately in the box with the bearing.
⁽²⁾ Also available as a GW type- filling slot and snap ring on same side. Also available 308GW2 with 20 mm width.
⁽³⁾ Also available as 312WG-3 with filling slot on same side as snap ring.

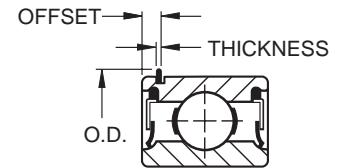
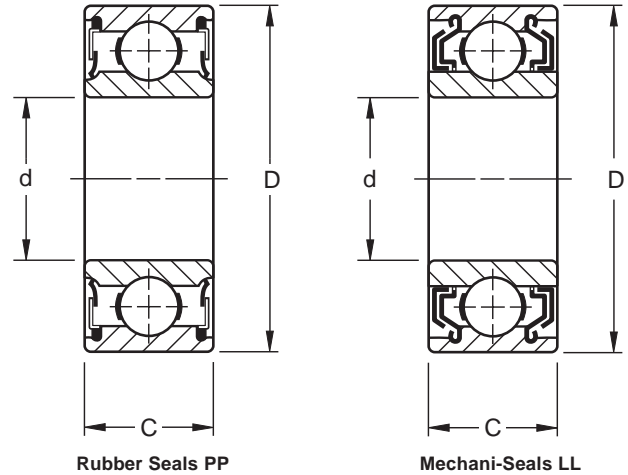


Medium, Wide Type W300PP Series W300KLL Series

The W300PP (rubber seal) series and the W300KLL (Mechani-Seal) series have the same bores and outside diameters as standard 300 series ball bearings, but the widths are equal to the 5300 series double row ball bearings. The added width provides extra support on shafts and in housings and eliminates the need for locknuts and lockwashers on applications such as electric motors.

Prepacked with the right amount of long-life, factory-filtered grease, the two series incorporate the same advantages as the standard width Mechani-Seal and rubber seal bearings.

These bearings are electric motor quality for applications where extra quietness is a requirement.



DIMENSIONS – TOLERANCES

Bearing Number	Bore d		Outside Diameter D		Width C		Fillet Radius ⁽¹⁾	Wt.	Static Load Rating C ₀	Extended Dynamic Load Rating C _E	Snap Ring PPG														
	Rubber Seal PP	Mechani-seal LL	tolerance +0.0000" +0.000 mm to minus	tolerance +0.0000" +0.000 mm to minus	+0.000" -0.005" +0.00 mm -0.12 mm						O.D.	thickness	offset												
	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg	lbs.	N	lbs.	N	in.	mm	in.	mm	in.	mm					
W304PP	—	0.7874	20	0.0004	0.010	2.0472	52	0.0005	0.013	0.875	22.22	0.039	1.0	0.47	0.213	1760	7800	4050	17900	—	—	—	—	—	—
W305PP ⁽²⁾	—	0.9843	25	0.0004	0.010	2.4409	62	0.0005	0.013	1.000	25.40	0.039	1.0	0.78	0.354	2750	12200	6000	26600	2 ²¹ / ₃₂	67.5	0.065	1.65	0.242	6.15
W306PP	—	1.1811	30	0.0004	0.010	2.8346	72	0.0005	0.013	1.188	30.18	0.039	1.0	1.23	0.558	3550	15600	7650	33900	—	—	—	—	—	—
W307PP	W307KLL	1.3780	35	0.00045	0.012	3.1496	80	0.0005	0.013	1.375	34.92	0.059	1.5	1.72	0.780	4150	18400	8500	37700	—	—	—	—	—	—
W308PP ⁽²⁾	W308KLL ⁽²⁾	1.5748	40	0.00045	0.012	3.5433	90	0.0006	0.015	1.438	36.53	0.059	1.5	2.25	1.021	5850	25900	11400	50600	3 ⁵ / ₆₄	96.4	0.095	2.41	0.27	6.86
W309PP	W309KLL	1.7717	45	0.00045	0.012	3.9370	100	0.0006	0.015	1.562	39.67	0.059	1.5	3.02	1.370	7100	31500	13400	59000	—	—	—	—	—	—
W310PP	—	1.9685	50	0.00045	0.012	4.3307	110	0.0006	0.015	1.750	44.45	0.079	2.0	4.03	1.828	8500	37700	15600	69000	—	—	—	—	—	—
W311PP ⁽²⁾	W311KLL	2.1654	55	0.0006	0.015	4.7244	120	0.0006	0.015	1.938 ⁽³⁾	49.23	0.079	2.0	5.26	2.386	10000	44400	18300	81000	5 ¹ / ₂	129.4	0.109	2.77	0.396	10.06
W312PP ⁽²⁾	W312KLL	2.3622	60	0.0006	0.015	5.1181	130	0.0007	0.018	2.125 ⁽³⁾	53.98	0.079	2.0	6.73	3.053	11600	51500	20800	92000	5 1/2	139.7	0.109	2.77	0.396	10.06
W313PP	—	2.5591	65	0.0006	0.015	5.5118	140	0.0007	0.018	2.312 ⁽³⁾	58.72	0.079	2.0	8.56	3.883	13400	59500	23600	104000	—	—	—	—	—	—
W314PP	—	2.7559	70	0.0006	0.015	5.9055	150	0.0007	0.018	2.500 ⁽³⁾	63.50	0.079	2.0	10.43	4.731	15300	67000	26000	116000	—	—	—	—	—	—
W315PP	—	2.9528	75	0.0006	0.015	6.2992	160	0.0010	0.025	2.688 ⁽³⁾	68.28	0.079	2.0	12.81	5.811	17300	76000	29000	128000	—	—	—	—	—	—

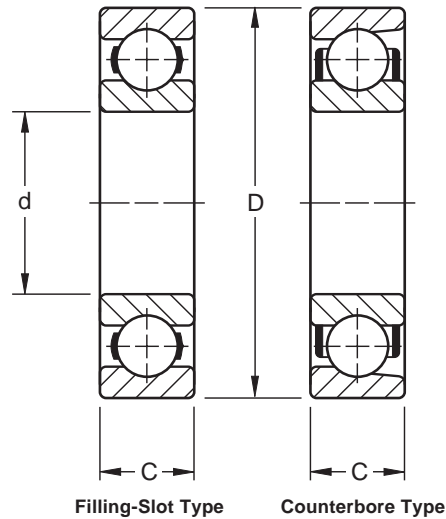
⁽¹⁾ Maximum shaft or housing fillet radius which bearing corners will clear.
⁽²⁾ Also available with snap ring. To order, add suffix "G" to bearing number. Example: W305PPG.
⁽³⁾ The snap ring is normally packaged separately in the box with the bearing.
⁽³⁾ Width tolerance is .000" to -.006" (.00mm to -.15mm).



Extra Large 100 Series

The dimensions of the extra-large series ball bearings were established by Fafnir to meet specific design requirements, before standard dimensions were established by the American Bearing Manufacturers Association (ABMA). It is essentially a metric series.

These bearings are available in the 100 series (extra light) and in a radially-fitted counterbore type having a maximum complement of balls, identified by the suffix WI. The latter is designed to take thrust in one direction only.



Dimensions – Tolerances

Bearing Number			Bore d				Outside Diameter D				Width C		Fillet Radius ⁽¹⁾		Weight						Static Load Rating C ₀		Extended Dynamic Load Rating C _E				
filling-slot type	counter-bore type	one shield D	tolerance		tolerance		tolerance		tolerance		tolerance		filling-slot type	counter-bore type	shielded type	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	N	lbs.	N		
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm														in.	mm
100 SERIES																											
120W2	—	120WD2N	3.9370	100	0.0008	0.020	6.2992	160	0.0010	0.025	1.102 ⁽⁴⁾	28	0.079	2.01	4.5	2.041	—	—	4.5	2.041	17000	75000	24000	106000			
122W	122WI	122WD2N ⁽³⁾	4.3307	110	0.0008	0.020	6.8898	175	0.0010	0.025	1.181 ⁽⁴⁾	30	0.079	2.01	6.09	2.762	6.25	2.835	6.96	3.157	18000	80000	26000	116000			
124W	124WI	124WD	4.7244	120	0.0008	0.020	7.4803	190	0.0012	0.030	1.260 ⁽⁴⁾	32	0.079	2.01	7.66	3.475	7.8	3.538	7.64	3.466	22400	98000	31500	140000			
126W	126WI	126WD	5.1181	130	0.0010	0.025	8.0709	205	0.0012	0.030	1.339	34	0.079	2.01	9.56	4.336	9.52	4.318	9.55	4.332	24500	110000	33500	146000			
128W	128WI	128WD	5.5118	140	0.0010	0.025	8.6614	220	0.0012	0.030	1.417	36	0.079	2.01	11.55	5.239	11.56	5.244	11.67	5.294	27000	122000	36500	163000			
130W	—	130WD	5.9055	150	0.0010	0.025	9.2520	235	0.0012	0.030	1.496	38	0.079	2.01	13.84	6.278	—	—	14.19	6.437	31500	140000	41500	183000			
132W	—	132WD	6.2992	160	0.0010	0.025	9.8425	250	0.0012	0.030	1.575	40	0.098	2.49	16.3	7.394	—	—	16.5	7.484	35500	160000	46500	208000			
134W	—	—	6.6929	170	0.0010	0.025	10.4331	265	0.0014	0.035	1.654	42	0.098	2.49	19.95	9.049	—	—	—	—	40000	180000	51000	224000			
—	—	136WD2N	7.0866	180	0.0010	0.025	11.0236	280	0.0014	0.035	1.929	49	0.098	2.49	—	—	—	—	24.26	11.004	45000	200000	55000	245000			
138W	—	—	7.4803	190	0.0120	0.030	11.8110	300	0.0014	0.035	1.811 ⁽²⁾	46	0.098	2.49	28.5	12.928	—	—	—	—	56000	245000	64000	285000			

⁽¹⁾ Maximum shaft or housing fillet radius which bearing corners will clear.

⁽²⁾ +.000", -.010" (+.00mm, -.25mm)

⁽³⁾ 35mm width

⁽⁴⁾ Width tolerance is +.000", -.008" (+.00mm, -.20mm)