

spherical roller bearings
K — tapered bore

pillow blocks
(check for availability)

DC needle roller bearings

caged rollers

roller bearings

cam followers

airframe bearings

needle thrust bearings

roller thrust bearings

needle rollers

spherical roller bearings

DC roller clutches

extra-precision bearings

Open end full complement mechanically retained drawn cup needle roller bearings, manufactured to inch standards, are offered with extra-precision specifications. The manufacturing tolerance of these bearings is one-third that of the precision bearings. In production operations using closer tolerances on shaft and housing, they will assemble with consistently lower radial internal clearances than can be expected with the precision series bearings.

Extra-precision bearings are suitable for those applications requiring close control of radial play and eccentricity. They are also preferred when two bearings are mounted adjacent to each other since the greater accuracy in manufacture will provide better load distribution between the bearings.

Nominal dimensions, load ratings, limiting speeds and other general specifications for Extra-Precision Bearings are the same as those for the corresponding "B" or "BH" sizes of Drawn Cup Needle Bearings. Consequently, the tabular data on pages 62 to 79 can be used in bearing size selection.

When ordering an extra-precision bearing, add the prefix letter "G" to the bearing designation. For example, after following the size selection procedure outlined on pages 50 to 53, bearing B-1212 is selected, but extra precision tolerances are required. These are designated by ordering a GB-1212 bearing.

To realize the advantages of the expected closer internal clearances of the extra-precision bearing, the user must have the capability of producing housing bores and shaft raceway diameters to the close tolerances indicated by the tabular data on the facing page.

The resulting radial clearance for an installed extra-precision drawn cup needle roller bearing in the medium size range will vary from .0004" (0,010 mm) to .0012" (0,03 mm) when used for a rotating application.

Inspection dimensions for the extra-precision bearings are given in the table at the right. Note that these bearings must be inspected while mounted in the specified ring gauge. Bearing bores are checked with "GO" and "NO GO" plug gauges. The "GO" gauge size is the minimum diameter inside the needle rollers. The "NO GO" gauge size is .0001" (0,0025 mm) larger than the maximum diameter inside the needle rollers.

Procedures for selecting ring and plug gauge dimensions are the same as for those involving precision needle bearings as shown on page 61, except that the ring gauge diameters and diameters inside the needle rollers must be drawn from the table on this page.

nominal bore diameter inches	INCH DI	
	ring gauge inches	
1/8	.2473	
5/32	.2785	
3/16	.3390	
1/4	.4328	
5/16	.4953	
H 5/16	.5578	
3/8	.5578	
H 3/8	.6203	
7/16	.6203	
H 7/16	.6828	
1/2	.6828	.5
H 1/2	.7453	.5
9/16	.7453	.50
H 9/16	.8078	.50
5/8	.8078	.62
H 5/8	.8703	.62
11/16	.8703	.68
H 11/16	.9328	.68
3/4	.9950	.75
H 3/4	1.0575	.75
13/16	1.0575	.812
H 13/16	1.1200	.812
7/8	1.1200	.875
H 7/8	1.1825	.875
15/16	1.1825	.9375
1	1.2450	1.000
H 1	1.3075	1.000
1 1/16	1.3075	1.0628
1 1/8	1.3700	1.1253
H 1 1/8	1.4950	1.1253
1 3/16	1.4950	1.1878
1 1/4	1.4950	1.2503
H 1 1/4	1.6200	1.2503
1 5/16	1.6200	1.3128
1 3/8	1.6200	1.3753
H 1 3/8	1.7450	1.3753
1 1/2	1.8700	1.5003
1 5/8	1.9950	1.6253
1 3/4	2.1200	1.7503
1 7/8	2.2450	1.8753
2	2.3700	2.0003
H 2 1/16	2.5262	2.0628
2 1/8	2.4950	2.1253
2 1/4	2.6200	2.2503
NB 2 1/2	2.8745	2.5006
2 3/8	2.9950	2.6254
2 3/4	3.1200	2.7504
NBH 3	3.4995	3.0006
3 1/2	3.9950	3.5004

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GAUGING

extra-precision bearings

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nominal bore diameter inches	INCH DIMENSIONS			METRIC DIMENSIONS	
	ring gauge inches	diameter inside needle rollers		ring gauge mm	diameter need min.
		min.	max.		
$\frac{1}{8}$	.2473	.1256	.1260	6,2814	3,1902
$\frac{5}{32}$	.2785	.1569	.1573	7,0739	3,9853
$\frac{3}{16}$	.3390	.1881	.1885	8,6106	4,7777
$\frac{1}{4}$	.4328	.2506	.2510	10,9931	6,3652
$\frac{5}{16}$	.4953	.3131	.3135	12,5806	7,9527
H $\frac{5}{16}$	.5578	.3131	.3135	14,1681	7,9527
$\frac{3}{8}$	.5578	.3756	.3760	14,1681	9,5402
H $\frac{3}{8}$	.6203	.3756	.3760	15,7556	9,5402
$\frac{7}{16}$	.6203	.4381	.4385	15,7556	11,1277
H $\frac{7}{16}$	.6828	.4381	.4385	17,3431	11,1277
$\frac{1}{2}$	.6828	.5006	.5010	17,3431	12,7152
H $\frac{1}{2}$	.7453	.5006	.5010	18,9306	12,7152
$\frac{9}{16}$	.7453	.5631	.5635	18,9306	14,3027
H $\frac{9}{16}$	.8078	.5631	.5635	20,5181	14,3027
$\frac{5}{8}$	.8078	.6256	.6260	20,5181	15,8902
H $\frac{5}{8}$	.8703	.6256	.6260	22,1056	15,8902
$\frac{11}{16}$	.8703	.6881	.6885	22,1056	17,4777
H $\frac{11}{16}$	.9328	.6881	.6885	23,6931	17,4777
$\frac{3}{4}$	.9950	.7503	.7507	25,2730	19,0576
H $\frac{3}{4}$	1.0575	.7503	.7507	26,8605	19,0576
$\frac{13}{16}$	1.0575	.8128	.8132	26,8605	20,6451
H $\frac{13}{16}$	1.1200	.8128	.8132	28,4480	20,6451
$\frac{7}{8}$	1.1200	.8753	.8757	28,4480	22,2326
H $\frac{7}{8}$	1.1825	.8753	.8757	30,0355	22,2326
$\frac{15}{16}$	1.1825	.9378	.9382	30,0355	23,8201
1	1.2450	1.0003	1.0007	31,6230	25,4076
H 1	1.3075	1.0003	1.0007	33,2105	25,4076
$\frac{11}{16}$	1.3075	1.0628	1.0632	33,2105	26,9951
$\frac{11}{8}$	1.3700	1.1253	1.1257	34,7980	28,5826
H $\frac{11}{8}$	1.4950	1.1253	1.1257	37,9730	28,5826
$\frac{13}{16}$	1.4950	1.1878	1.1882	37,9730	30,1701
$\frac{11}{4}$	1.4950	1.2503	1.2507	37,9730	31,7576
H $\frac{11}{4}$	1.6200	1.2503	1.2507	41,1480	31,7576
$\frac{15}{16}$	1.6200	1.3128	1.3132	41,1480	33,3451
$\frac{13}{8}$	1.6200	1.3753	1.3757	41,1480	34,9326
H $\frac{13}{8}$	1.7450	1.3753	1.3757	44,3230	34,9326
$\frac{11}{2}$	1.8700	1.5003	1.5008	47,4980	38,1076
$\frac{11}{8}$	1.9950	1.6253	1.6258	50,6730	41,2826
$\frac{13}{4}$	2.1200	1.7503	1.7508	53,8480	44,4576
$\frac{11}{2}$	2.2450	1.8753	1.8758	57,0230	47,6326
2	2.3700	2.0003	2.0008	60,1980	50,8076
H $\frac{21}{16}$	2.5262	2.0628	2.0633	64,1655	52,3951
$\frac{21}{8}$	2.4950	2.1253	2.1258	63,3730	53,9826
$\frac{21}{4}$	2.6200	2.2503	2.2508	66,5480	57,1576
NB $\frac{21}{2}$	2.8745	2.5006	2.5012	73,0123	63,5151
$\frac{23}{8}$	2.9950	2.6254	2.6260	76,0730	66,6851
$\frac{23}{4}$	3.1200	2.7504	2.7510	79,2480	69,8601
NB 3	3.4995	3.0006	3.0012	88,8873	76,2151
$\frac{31}{2}$	3.9950	3.5004	3.5010	101,4730	88,9101

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nominal bore diameter inches	INCH DIMENSIONS			METRIC DIMENSIONS			bearing bore designation	INCH DIMENSIONS				
	ring gauge inches	diameter inside needle rollers		ring gauge mm	diameter inside needle rollers			nominal bore inches	nominal o.d. inches	shaft raceway diameter inches		housing inch min.
		min.	max.		min.	max.				max.	min.	
1/8	.2473	.1256	.1260	6,2814	3,1902	3,2004	GB-2	1/8	1/4	.1251	.1248	.2470
5/32	.2785	.1569	.1573	7,0739	3,9853	3,9954	GB-2 1/2	5/32	9/32	.1564	.1561	.2782
3/16	.3390	.1881	.1885	8,6106	4,7777	4,7878	GB-3	3/16	11/32	.1876	.1873	.3387
1/4	.4328	.2506	.2510	10,9931	6,3652	6,3753	GB-4	1/4	7/16	.2501	.2498	.4325
5/16	.4953	.3131	.3135	12,5806	7,9527	7,9628	GB-5	5/16	1/2	.3126	.3123	.4950
H 5/16	.5578	.3131	.3135	14,1681	7,9527	7,9628	GBH-5	5/16	9/16	.3126	.3123	.5575
3/8	.5578	.3756	.3760	14,1681	9,5402	9,5503	GB-6	3/8	9/16	.3751	.3748	.5575
H 3/8	.6203	.3756	.3760	15,7556	9,5402	9,5503	GBH-6	3/8	5/8	.3751	.3748	.6200
7/16	.6203	.4381	.4385	15,7556	11,1277	11,1378	GB-7	7/16	5/8	.4376	.4373	.6200
H 7/16	.6828	.4381	.4385	17,3431	11,1277	11,1378	GBH-7	7/16	11/16	.4376	.4373	.6825
1/2	.6828	.5006	.5010	17,3431	12,7152	12,7253	GB-8	1/2	11/16	.5001	.4998	.6825
H 1/2	.7453	.5006	.5010	18,9306	12,7152	12,7253	GBH-8	1/2	3/4	.5001	.4998	.7450
9/16	.7453	.5631	.5635	18,9306	14,3027	14,3128	GB-9	9/16	3/4	.5626	.5623	.7450
H 9/16	.8078	.5631	.5635	20,5181	14,3027	14,3128	GBH-9	9/16	13/16	.5626	.5623	.8075
5/8	.8078	.6256	.6260	20,5181	15,8902	15,9003	GB-10	5/8	13/16	.6251	.6248	.8075
H 5/8	.8703	.6256	.6260	22,1056	15,8902	15,9003	GBH-10	5/8	7/8	.6251	.6248	.8700
11/16	.8703	.6881	.6885	22,1056	17,4777	17,4878	GB-11	11/16	7/8	.6876	.6873	.8700
H 11/16	.9328	.6881	.6885	23,6931	17,4777	17,4878	GBH-11	11/16	15/16	.6876	.6873	.9325
3/4	.9950	.7503	.7507	25,2730	19,0576	19,0677	GB-12	3/4	1	.7501	.7498	.9950
H 3/4	1.0575	.7503	.7507	26,8605	19,0576	19,0677	GBH-12	3/4	1 1/16	.7501	.7498	1.0575
13/16	1.0575	.8128	.8132	26,8605	20,6451	20,6552	GB-13	13/16	1 1/16	.8126	.8123	1.0575
H 13/16	1.1200	.8128	.8132	28,4480	20,6451	20,6552	GBH-13	13/16	1 1/8	.8126	.8123	1.1200
7/8	1.1200	.8753	.8757	28,4480	22,2326	22,2427	GB-14	7/8	1 1/8	.8751	.8748	1.1200
H 7/8	1.1825	.8753	.8757	30,0355	22,2326	22,2427	GBH-14	7/8	1 3/16	.8751	.8748	1.1825
15/16	1.1825	.9378	.9382	30,0355	23,8201	23,8302	GB-15	15/16	1 3/16	.9376	.9373	1.1825
1	1.2450	1.0003	1.0007	31,6230	25,4076	25,4177	GB-16	1	1 1/4	1.0001	.9998	1.2450
H 1	1.3075	1.0003	1.0007	33,2105	25,4076	25,4177	GBH-16	1	1 5/16	1.0001	.9998	1.3075
1 1/16	1.3075	1.0628	1.0632	33,2105	26,9951	27,0052	GB-17	1 1/16	1 5/16	1.0626	1.0623	1.3075
1 1/8	1.3700	1.1253	1.1257	34,7980	28,5826	28,5927	GB-18	1 1/8	1 3/8	1.1251	1.1248	1.3700
H 1 1/8	1.4950	1.1253	1.1257	37,9730	28,5826	28,5927	GBH-18	1 1/8	1 1/2	1.1251	1.1248	1.4950
1 3/16	1.4950	1.1878	1.1882	37,9730	30,1701	30,1802	GB-19	1 3/16	1 1/2	1.1876	1.1873	1.4950
1 1/4	1.4950	1.2503	1.2507	37,9730	31,7576	31,7677	GB-20	1 1/4	1 1/2	1.2501	1.2498	1.4950
H 1 1/4	1.6200	1.2503	1.2507	41,1480	31,7576	31,7677	GBH-20	1 1/4	1 5/8	1.2501	1.2498	1.6200
1 1/2	1.6200	1.3128	1.3132	41,1480	33,3451	33,3552	GB-21	1 1/2	1 5/8	1.3126	1.3123	1.6200
1 5/8	1.6200	1.3753	1.3757	41,1480	34,9326	34,9427	GB-22	1 5/8	1 5/8	1.3750	1.3747	1.6200
H 1 3/8	1.7450	1.3753	1.3757	44,3230	34,9326	34,9427	GBH-22	1 3/8	1 3/4	1.3750	1.3747	1.7450
1 1/2	1.8700	1.5003	1.5007	47,4980	38,1076	38,1177	GB-24	1 1/2	1 7/8	1.5000	1.4997	1.8700
1 5/8	1.9950	1.6253	1.6257	50,6730	41,2826	41,2927	GB-26	1 5/8	2	1.6250	1.6247	1.9950
1 3/4	2.1200	1.7503	1.7507	53,8480	44,4576	44,4677	GB-28	1 3/4	2 1/8	1.7500	1.7497	2.1200
H 1 3/4	2.2450	1.8753	1.8757	57,0230	47,6326	47,6427	GB-30	1 3/4	2 1/4	1.8750	1.8747	2.2450
2	2.3700	2.0003	2.0007	60,1980	50,8076	50,8177	GB-32	2	2 3/8	2.0000	1.9997	2.3700
H 2 1/16	2.5262	2.0628	2.0632	64,1655	52,3951	52,4052	GBH-33	2 1/16	2 17/32	2.0624	2.0621	2.5262
2 1/8	2.4950	2.1253	2.1257	63,3730	53,9826	53,9927	GB-34	2 1/8	2 1/2	2.1249	2.1246	2.4950
2 1/4	2.6200	2.2503	2.2507	66,5480	57,1576	57,1677	GB-36	2 1/4	2 5/8	2.2499	2.2496	2.6200
NB 2 1/2	2.8745	2.5006	2.5010	73,0123	63,5152	63,5253	GBN-40	2 1/2	2 7/8	2.5000	2.4997	2.8745
2 5/8	2.9950	2.6254	2.6260	76,0730	66,6852	66,6953	GB-42	2 5/8	3	2.6248	2.6245	2.9950
2 3/4	3.1200	2.7504	2.7510	79,2480	69,8602	69,8703	GB-44	2 3/4	3 1/8	2.7498	2.7495	3.1200
NBH 3	3.4995	3.0006	3.0012	88,8873	76,2152	76,2253	GNBH-48	3	3 1/2	3.0000	2.9997	3.4995
3 1/2	3.9950	3.5004	3.5010	101,4730	88,9102	88,9203	GB-56	3 1/2	4	3.4998	3.4995	3.9950

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	ring gauge inches	diameter inside needle rollers inches		ring gauge mm	diameter inside needle rollers mm
		min.	max.		
$\frac{1}{8}$	.2473	.1256	.1260	6,2814	3,190
$\frac{9}{32}$	.2785	.1569	.1573	7,0739	3,980
$\frac{3}{16}$	.3390	.1881	.1885	8,6106	4,770
$\frac{1}{4}$	.4328	.2506	.2510	10,9931	6,360
$\frac{5}{16}$	.4953	.3131	.3135	12,5806	7,950
H $\frac{5}{16}$	.5578	.3131	.3135	14,1681	7,950
$\frac{3}{8}$	.5578	.3756	.3760	14,1681	9,540
H $\frac{3}{8}$	.6203	.3756	.3760	15,7556	9,540
$\frac{7}{16}$	.6203	.4381	.4385	15,7556	11,120
H $\frac{7}{16}$	.6828	.4381	.4385	17,3431	11,120
$\frac{1}{2}$	.6828	.5006	.5010	17,3431	12,710
H $\frac{1}{2}$	.7453	.5006	.5010	18,9306	12,710
$\frac{9}{16}$	.7453	.5631	.5635	18,9306	14,300
H $\frac{9}{16}$	.8078	.5631	.5635	20,5181	14,300
$\frac{5}{8}$	.8078	.6256	.6260	20,5181	15,890
H $\frac{5}{8}$	.8703	.6256	.6260	22,1056	15,890
$\frac{11}{16}$	.8703	.6881	.6885	22,1056	17,470
H $\frac{11}{16}$	.9328	.6881	.6885	23,6931	17,470
$\frac{3}{4}$	.9950	.7503	.7507	25,2730	19,050
H $\frac{3}{4}$	1.0575	.7503	.7507	26,8605	19,050
$\frac{13}{16}$	1.0575	.8128	.8132	26,8605	20,640
H $\frac{13}{16}$	1.1200	.8128	.8132	28,4480	20,640
$\frac{7}{8}$	1.1200	.8753	.8757	28,4480	22,230
H $\frac{7}{8}$	1.1825	.8753	.8757	30,0355	22,230
$\frac{15}{16}$	1.1825	.9378	.9382	30,0355	23,820
1	1.2450	1.0003	1.0007	31,6230	25,400
H 1	1.3075	1.0003	1.0007	33,2105	25,400
$\frac{11}{16}$	1.3075	1.0628	1.0632	33,2105	26,990
$\frac{11}{8}$	1.3700	1.1253	1.1257	34,7980	28,580
H $\frac{11}{8}$	1.4950	1.1253	1.1257	37,9730	28,580
$\frac{13}{16}$	1.4950	1.1878	1.1882	37,9730	30,170
$\frac{11}{4}$	1.4950	1.2503	1.2507	37,9730	31,750
H $\frac{11}{4}$	1.6200	1.2503	1.2507	41,1480	31,750
$\frac{15}{16}$	1.6200	1.3128	1.3132	41,1480	33,340
$\frac{13}{8}$	1.6200	1.3753	1.3757	41,1480	34,930
H $\frac{13}{8}$	1.7450	1.3753	1.3757	44,3230	34,930
$\frac{11}{2}$	1.8700	1.5003	1.5008	47,4980	38,100
$\frac{15}{8}$	1.9950	1.6253	1.6258	50,6730	41,280
$\frac{13}{4}$	2.1200	1.7503	1.7508	53,8480	44,450
$\frac{17}{8}$	2.2450	1.8753	1.8758	57,0230	47,630
2	2.3700	2.0003	2.0008	60,1980	50,800
H $\frac{21}{16}$	2.5262	2.0628	2.0633	64,1655	52,390
$\frac{21}{8}$	2.4950	2.1253	2.1258	63,3730	53,980
$\frac{21}{4}$	2.6200	2.2503	2.2508	66,5480	57,150
NB $\frac{21}{2}$	2.8745	2.5006	2.5012	73,0123	63,515
$\frac{25}{8}$	2.9950	2.6254	2.6260	76,0730	66,685
$\frac{23}{4}$	3.1200	2.7504	2.7510	79,2480	69,860
NBH 3	3.4995	3.0006	3.0012	88,8873	76,215
$\frac{31}{2}$	3.9950	3.5004	3.5010	101,4730	88,910

EXTRA-PRECISION DRAWN CUP BEARINGS

MOUNTING

bearing bore designation	INCH DIMENSIONS						METRIC DIMENSIONS					
	nominal		shaft raceway diameter		housing bore		nominal		shaft raceway diameter		housing bore	
	bore	o.d.	inches		inches		bore	o.d.	millimetres		millimetres	
	inches	inches	max.	min.	min.	max.	mm	mm	max.	min.	min.	max.
GB-2	1/8	1/4	.1251	.1248	.2470	.2473	3,18	6,35	3,178	3,170	6,274	6,281
GB-2 1/2	5/32	9/32	.1564	.1561	.2782	.2785	3,97	7,14	3,973	3,965	7,066	7,074
GB-3	3/16	11/32	.1876	.1873	.3387	.3390	4,76	8,73	4,765	4,757	8,603	8,611
GB-4	1/4	7/16	.2501	.2498	.4325	.4328	6,35	11,11	6,352	6,345	10,986	10,993
GB-5	5/16	1/2	.3126	.3123	.4950	.4953	7,94	12,70	7,940	7,932	12,573	12,581
GBH-5	5/16	9/16	.3126	.3123	.5575	.5578	7,94	14,29	7,940	7,932	14,160	14,168
GB-6	3/8	9/16	.3751	.3748	.5575	.5578	9,53	14,29	9,528	9,520	14,160	14,168
GBH-6	3/8	5/8	.3751	.3748	.6200	.6203	9,53	15,88	9,528	9,520	15,748	15,756
GB-7	7/16	5/8	.4376	.4373	.6200	.6203	11,11	15,88	11,115	11,107	15,748	15,756
GBH-7	7/16	11/16	.4376	.4373	.6825	.6828	11,11	17,46	11,115	11,107	17,336	17,343
GB-8	1/2	11/16	.5001	.4998	.6825	.6828	12,70	17,46	12,702	12,695	17,336	17,343
GBH-8	1/2	3/4	.5001	.4998	.7450	.7453	12,70	19,05	12,702	12,695	18,923	18,931
GB-9	9/16	3/4	.5626	.5623	.7450	.7453	14,29	19,05	14,290	14,282	18,923	18,931
GBH-9	9/16	13/16	.5626	.5623	.8075	.8078	14,29	20,64	14,290	14,282	20,510	20,518
GB-10	5/8	13/16	.6251	.6248	.8075	.8078	15,88	20,64	15,878	15,870	20,510	20,518
GBH-10	5/8	7/8	.6251	.6248	.8700	.8703	15,88	22,23	15,878	15,870	22,098	22,106
GB-11	11/16	7/8	.6876	.6873	.8700	.8703	17,46	22,23	17,465	17,457	22,098	22,106
GBH-11	11/16	15/16	.6876	.6873	.9325	.9328	17,46	23,81	17,465	17,457	23,686	23,693
GB-12	3/4	1	.7501	.7498	.9950	.9953	19,05	25,40	19,053	19,045	25,273	25,281
GBH-12	3/4	1 1/16	.7501	.7498	1,0575	1,0578	19,05	26,99	19,053	19,045	26,860	26,868
GB-13	13/16	1 1/16	.8126	.8123	1,0575	1,0578	20,64	26,99	20,640	20,632	26,860	26,868
GBH-13	13/16	1 1/8	.8126	.8123	1,1200	1,1203	20,64	28,58	20,640	20,632	28,448	28,456
GB-14	7/8	1 1/8	.8751	.8748	1,1200	1,1203	22,23	28,58	22,228	22,220	28,448	28,456
GBH-14	7/8	1 3/16	.8751	.8748	1,1825	1,1829	22,23	30,16	22,228	22,220	30,036	30,046
GB-15	15/16	1 3/16	.9376	.9373	1,1825	1,1829	23,81	30,16	23,815	23,807	30,036	30,046
GB-16	1	1 1/4	1,0001	.9998	1,2450	1,2454	25,40	31,75	25,403	25,395	31,623	31,633
GBH-16	1	1 5/16	1,0001	.9998	1,3075	1,3079	25,40	33,34	25,403	25,395	33,210	33,221
GB-17	1 1/16	1 5/16	1,0626	1,0623	1,3075	1,3079	26,99	33,34	26,990	26,982	33,210	33,221
GB-18	1 1/8	1 3/8	1,1251	1,1248	1,3700	1,3704	28,58	34,93	28,578	28,570	34,798	34,808
GBH-18	1 1/8	1 1/2	1,1251	1,1248	1,4950	1,4955	28,58	38,10	28,578	28,570	37,973	37,986
GB-19	1 3/16	1 1/2	1,1876	1,1873	1,4950	1,4955	30,16	38,10	30,165	30,157	37,973	37,986
GB-20	1 1/4	1 1/2	1,2501	1,2498	1,4950	1,4955	31,75	38,10	31,753	31,745	37,973	37,986
GBH-20	1 1/4	1 5/8	1,2501	1,2498	1,6200	1,6205	31,75	41,28	31,753	31,745	41,148	41,161
GB-21	1 5/16	1 5/8	1,3126	1,3123	1,6200	1,6205	33,34	41,28	33,340	33,332	41,148	41,161
GB-22	1 3/8	1 5/8	1,3750	1,3747	1,6200	1,6205	34,93	41,28	34,925	34,917	41,148	41,161
GB-23	1 3/8	1 3/4	1,3750	1,3747	1,7450	1,7455	34,93	44,45	34,925	34,917	44,323	44,336
GB-24	1 1/2	1 3/8	1,5000	1,4997	1,8700	1,8705	38,10	47,63	38,100	38,092	47,498	47,511
GB-26	1 5/8	2	1,6250	1,6247	1,9950	1,9955	41,28	50,80	41,275	41,267	50,673	50,686
GB-28	1 3/4	2 1/8	1,7500	1,7497	2,1200	2,1205	44,45	53,98	44,450	44,442	53,848	53,861
GB-30	1 7/8	2 1/4	1,8750	1,8747	2,2450	2,2455	47,63	57,15	47,625	47,617	57,023	57,036
GB-32	2	2 3/8	2,0000	1,9997	2,3700	2,3705	50,80	60,33	50,800	50,792	60,198	60,211
GB-33	2 1/16	2 1/32	2,0624	2,0621	2,5262	2,5267	52,39	64,29	52,385	52,377	64,165	64,178
GB-34	2 1/8	2 1/2	2,1249	2,1246	2,4950	2,4955	53,98	63,50	53,972	53,965	63,373	63,386
GB-36	2 1/4	2 5/8	2,2499	2,2496	2,6200	2,6205	57,15	66,68	57,147	57,140	66,548	66,561
GB-40	2 1/2	2 7/8	2,5000	2,4997	2,8745	2,8751	63,50	73,03	63,500	63,492	73,012	73,028
GB-42	2 5/8	3	2,6248	2,6245	2,9950	2,9956	66,68	76,20	66,670	66,662	76,073	76,088
GB-44	2 3/4	3 1/8	2,7498	2,7495	3,1200	3,1206	69,85	79,38	69,845	69,837	79,248	79,263
GB-48	3	3 1/2	3,0000	2,9997	3,4995	3,5001	76,20	88,90	76,200	76,192	88,887	88,902
GB-56	3 1/2	4	3,4998	3,4995	3,9950	3,9956	88,90	101,60	88,895	88,887	101,473	101,488

DC NEEDLE & ROLLER BRGS.

EXTRA-PRECISION DRAWN CUP BEARINGS

MOUNTING

INCH DIMENSIONS						METRIC DIMENSIONS					
nominal bore inches	nominal o.d. inches	shaft raceway diameter		housing bore		nominal bore mm	nominal o.d. mm	shaft raceway diameter		housing bore	
		inches max.	inches min.	inches min.	inches max.			millimetres max.	millimetres min.	millimetres min.	millimetres max.
1/8	1/4	.1251	.1248	.2470	.2473	3,18	6,35	3,178	3,170	6,274	6,281
5/32	9/32	.1564	.1561	.2782	.2785	3,97	7,14	3,973	3,965	7,066	7,074
3/16	11/32	.1876	.1873	.3387	.3390	4,76	8,73	4,765	4,757	8,603	8,611
1/4	7/16	.2501	.2498	.4325	.4328	6,35	11,11	6,352	6,345	10,986	10,993
5/16	1/2	.3126	.3123	.4950	.4953	7,94	12,70	7,940	7,932	12,573	12,581
5/16	9/16	.3126	.3123	.5575	.5578	7,94	14,29	7,940	7,932	14,160	14,168
3/8	5/8	.3751	.3748	.5575	.5578	9,53	14,29	9,528	9,520	14,160	14,168
3/8	5/8	.3751	.3748	.6200	.6203	9,53	15,88	9,528	9,520	15,748	15,756
7/16	5/8	.4376	.4373	.6200	.6203	11,11	15,88	11,115	11,107	15,748	15,756
7/16	11/16	.4376	.4373	.6825	.6828	11,11	17,46	11,115	11,107	17,336	17,343
1/2	11/16	.5001	.4998	.6825	.6828	12,70	17,46	12,702	12,695	17,336	17,343
1/2	3/4	.5001	.4998	.7450	.7453	12,70	19,05	12,702	12,695	18,923	18,931
9/16	3/4	.5626	.5623	.7450	.7453	14,29	19,05	14,290	14,282	18,923	18,931
9/16	13/16	.5626	.5623	.8075	.8078	14,29	20,64	14,290	14,282	20,510	20,518
5/8	13/16	.6251	.6248	.8075	.8078	15,88	20,64	15,878	15,870	20,510	20,518
5/8	7/8	.6251	.6248	.8700	.8703	15,88	22,23	15,878	15,870	22,098	22,106
11/16	7/8	.6876	.6873	.8700	.8703	17,46	22,23	17,465	17,457	22,098	22,106
11/16	15/16	.6876	.6873	.9325	.9328	17,46	23,81	17,465	17,457	23,686	23,693
3/4	1	.7501	.7498	.9950	.9953	19,05	25,40	19,053	19,045	25,273	25,281
3/4	11/16	.7501	.7498	1,0575	1,0578	19,05	26,99	19,053	19,045	26,860	26,868
13/16	11/16	.8126	.8123	1,0575	1,0578	20,64	26,99	20,640	20,632	26,860	26,868
13/16	11/8	.8126	.8123	1,1200	1,1203	20,64	28,58	20,640	20,632	28,448	28,456
7/8	11/8	.8751	.8748	1,1200	1,1203	22,23	28,58	22,228	22,220	28,448	28,456
7/8	13/16	.8751	.8748	1,1825	1,1829	22,23	30,16	22,228	22,220	30,036	30,046
15/16	13/16	.9376	.9373	1,1825	1,1829	23,81	30,16	23,815	23,807	30,036	30,046
1	1 1/4	1,0001	.9998	1,2450	1,2454	25,40	31,75	25,403	25,395	31,623	31,633
1	1 1/16	1,0001	.9998	1,3075	1,3079	25,40	33,34	25,403	25,395	33,210	33,221
1 1/16	1 1/16	1,0626	1,0623	1,3075	1,3079	26,99	33,34	26,990	26,982	33,210	33,221
1 1/8	1 3/8	1,1251	1,1248	1,3700	1,3704	28,58	34,93	28,578	28,570	34,798	34,808
1 1/8	1 1/2	1,1251	1,1248	1,4950	1,4955	28,58	38,10	28,578	28,570	37,973	37,986
1 1/16	1 1/2	1,1876	1,1873	1,4950	1,4955	30,16	38,10	30,165	30,157	37,973	37,986
1 1/4	1 1/2	1,2501	1,2498	1,4950	1,4955	31,75	38,10	31,753	31,745	37,973	37,986
1 1/4	1 5/8	1,2501	1,2498	1,6200	1,6205	31,75	41,28	31,753	31,745	41,148	41,161
1 1/16	1 5/8	1,3126	1,3123	1,6200	1,6205	33,34	41,28	33,340	33,332	41,148	41,161
1 3/8	1 5/8	1,3750	1,3747	1,6200	1,6205	34,93	41,28	34,925	34,917	41,148	41,161
1 3/8	1 3/4	1,3750	1,3747	1,7450	1,7455	34,93	44,45	34,925	34,917	44,323	44,336
1 1/2	1 7/8	1,5000	1,4997	1,8700	1,8705	38,10	47,63	38,100	38,092	47,498	47,511
1 5/8	2	1,6250	1,6247	1,9950	1,9955	41,28	50,80	41,275	41,267	50,673	50,686
1 3/4	2 1/8	1,7500	1,7497	2,1200	2,1205	44,45	53,98	44,450	44,442	53,848	53,861
1 7/8	2 1/4	1,8750	1,8747	2,2450	2,2455	47,63	57,15	47,625	47,617	57,023	57,036
2	2 3/8	2,0000	1,9997	2,3700	2,3705	50,80	60,33	50,800	50,792	60,198	60,211
2 1/16	2 1/32	2,0624	2,0621	2,5262	2,5267	52,39	64,29	52,385	52,377	64,165	64,178
2 1/8	2 1/2	2,1249	2,1246	2,4950	2,4955	53,98	63,50	53,972	53,965	63,373	63,386
2 1/4	2 5/8	2,2499	2,2496	2,6200	2,6205	57,15	66,68	57,147	57,140	66,548	66,561
2 1/2	2 7/8	2,5000	2,4997	2,8745	2,8751	63,50	73,03	63,500	63,492	73,012	73,028
2 5/8	3	2,6248	2,6245	2,9950	2,9956	66,68	76,20	66,670	66,662	76,073	76,088
2 3/4	3 1/8	2,7498	2,7495	3,1200	3,1206	69,85	79,38	69,845	69,837	79,248	79,263
3	3 1/2	3,0000	2,9997	3,4995	3,5001	76,20	88,90	76,200	76,192	88,887	88,902
3 1/2	4	3,4998	3,4995	3,9950	3,9956	88,90	101,60	88,895	88,887	101,473	101,488

DC NEEDLE & ROLLER BROS.