



NB National
Bronze MICHIGAN

Since 1911

Michigan's Largest Inventory

ISO 9001: 2008 Certified



TABLE OF CONTENTS

Free-Cutting Brass	5
Continuous Cast Bronze CDA 932	15
Continuous Cast Aluminum Bronze	29
Continuous Cast Aluminum Bronze	35
Manganese Bronze.....	37
Roofing Copper	39
Round Copper Rod/Square Copper Bar	40
Rectangular Copper Bar	41
Plate Rolled Copper	42
Square RWMA Class 2	43
Hexagon RWMA Class 2	43
Round RWMA Class 2	43
Rectangular RWMA Class 2	44
RWMA Class 2 Plate.....	44
Round RWMA Class 3 Rod	45
Hexagon RWMA Class 3 Rod.....	45
Square RWMA Class 3 Bar.....	45
Rectangular RWMA Class 3	46
RWMA Class 3 Plate.....	46
Oil Impregnated Powder Metal Bronze Bearings	47
Cast Bronze Sleeve Bearings	81
Advantages of #500 Series Bearings	93
Brass and Bronze Standard Casting Alloys Chart.....	108



Ordering by phone

The easy and convenient way to order. Give us a call anytime between 7:30 a.m. and 5:00 p.m., Monday through Friday. Our Customer Service Department will be happy to assist you with prompt, courteous service.

Terms

Payment terms are net 30 days with approved credit. For your convenience we also accept Visa, MasterCard and American Express.

Delivery

NBMC will deliver your material free of charge in the metropolitan Detroit area. Outside of our delivery area we can provide delivery on any order via UPS, or common carrier on a daily basis.



Toll Free *Please call*

East Side: 1-800-875-3558

West Side: 1-800-331-7630

Fax: (586) 791-9044

Web: www.nationalbronze.com

Email: Sales@nationalbronze.com

Location

28070 Hayes Road

Roseville, MI 48066

ISO 9001: 2008 Certified



Background and History

1911: Founded on the East side of Detroit and originally known as National Bronze and Aluminum Casting Company.

1917: Production was turned toward the World War I effort as the country declared war on Germany.

1920s and 1930s: Experienced rapid growth servicing the exploding automotive industry as dozens of new companies competed for their share of the market.

1940s: Began machining the castings we produced. All resources utilized to manufacture parts for wartime vehicles and fighter planes as Detroit became known as the “Arsenal of Democracy” during WWII.

1950s and 1960s: Specialized in Bronze bearings, Bronze bushings and machined details of non-ferrous metals as our customers began producing a seemingly endless supply of durable goods following World War II.

1970s and 1980s: Began significant investments in “NC” followed by “CNC”, computerized machining equipment.

1990: Opened a metal service center offering non-ferrous alloys. Our business plan was clearly defined: *offer quick delivery of small quantity, non-ferrous alloys, from stock, at a reasonable price.*

2001: Honored by the Society of Automotive Engineers and Mayor Dennis Archer as one of Detroit’s oldest companies at its Tri-Centennial Celebration.

2002: Manufacturing operation and metal service center moved to a new home in Clinton Township, Michigan.

2010: Purchased the assets of United Bronze, Inc., becoming Michigan’s largest source for non-ferrous materials and machined non-ferrous parts.

2011: Celebrated our 100th anniversary. Moved to larger facility in Roseville, Michigan, consolidating operations.



Markets Served

- Automotive
- Appliance
- Material handling
- Electrical/welding
- General manufacturing
- Agricultural equipment
- Diesel engine
- Energy
- Off-road equipment
- Pump
- Oil field
- Machine repair

Product Line

- Precision bushings, details, components, etc. in all non ferrous alloys and aircraft aluminums machined to specification.
- Standard cast bronze bearings
- Oil impregnated, powder metal bushings
- Aluminum bronze bar stock
- Manganese bronze bar stock
- SAE 660 bronze bar stock
- Brass bar stock
- Copper bar stock
- Rectangular wearplates
- Graphite plugged bushings/wearplates
- Precision machining services - All alloys

BRASS



Free-Cutting Brass Rod and Bar

UNS-C36000

Free-Cutting Brass is the accepted standard for general high speed screw machine work with a machinability rating of 100. It is the most economical and practical metal for drilling, knurling, milling, tapping, threading and turning. Uniformity of composition, temper and free-cutting characteristics permit duplication of known machine feeds and speeds and avoids excessive tool wear and breakage. Brass is rustproof, corrosion resistant; finishes with a smooth surface, and is excellent for plating. Additional economies are realized due to the relatively high value of Brass scrap wherein the net metal cost of a Brass part decreases as the percentage of scrap increases.



Nominal Chemical Composition

Copper	61.5%
Zinc.....	35.4%
Lead.....	3.1%

Typical Mechanical Properties

Tensile Strength	58,000 PSI
Yield Strength	45,000 PSI
Elongation in 2 inches.....	25%
Shear Strength	34,000 PSI
Rockwell Hardness, B Scale.....	78

Typical Physical Properties (Average Values)

Density, Lbs./Cu. In.....	0.307
Melting Point, approx. °F.....	1650
Electrical Conductivity, IACS at 20°C (68°F)	26%
Thermal Conductivity, btu at 20°C (68°F).....	67
Average Coefficient of Thermal Expansion at 68° to 572°F.....	0.0000114

Round Free-Cutting Brass Rod



Solid Round

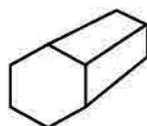
Screw Machine Quality

12 Foot Lengths UNS-C36000

Item Number	Dim. "A" Inches	Lbs. Per Foot	Tolerance
			Dim. "A" (+ & -)
RBR 062	1/16	.0113	.0013
RBR 078	5/64	.0177	.0013
RBR 093	3/32	.0254	.0013
RBR 109	7/64	.0346	.0013
RBR 125	1/8	.0452	.0013
RBR 140	9/64	.0572	.0013
RBR 156	5/32	.0706	.0015
RBR 171	11/64	.0855	.0015
RBR 187	3/16	.102	.0015
RBR 203	13/64	.119	.0015
RBR 218	7/32	.138	.0015
RBR 234	15/64	.159	.0015
RBR 250	1/4	.181	.0015
RBR 265	17/64	.204	.0015
RBR 281	9/32	.229	.0015
RBR 296	19/64	.255	.0015
RBR 312	5/16	.283	.0015
RBR 328	21/64	.312	.0015
RBR 343	11/32	.342	.0015
RBR 359	23/64	.374	.0015
RBR 375	3/8	.407	.0015
RBR 390	25/64	.441	.0015
RBR 406	13/32	.478	.0015
RBR 421	27/64	.515	.0015
RBR 437	7/16	.554	.0015
RBR 453	29/64	.594	.0015
RBR 468	15/32	.636	.0015
RBR 484	31/64	.679	.0015
RBR 500	1/2	.723	.0015
RBR 515	33/64	.769	.002
RBR 531	17/32	.817	.002
RBR 562	9/16	.915	.002
RBR 593	19/32	1.02	.002
RBR 625	5/8	1.13	.002
RBR 656	21/32	1.25	.002
RBR 687	11/16	1.37	.002
RBR 718	23/32	1.49	.002
RBR 750	3/4	1.63	.002
RBR 781	25/32	1.77	.002
RBR 812	13/16	1.91	.002
RBR 843	27/32	2.06	.002
RBR 875	7/8	2.22	.002
RBR 906	29/32	2.38	.002
RBR 937	15/16	2.54	.002
RBR 968	31/32	2.72	.002
RBR 1000	1	2.89	.002

Item Number	Dim. "A" Inches	Lbs. Per Foot	Tolerance
			Dim. "A" (+ & -)
RBR 1070	1-1/16	3.27	.0025
RBR 1120	1-1/8	3.66	.0025
RBR 1180	1-3/16	4.08	.0025
RBR 1210	1-7/32	4.29	.0025
RBR 1220	1-1/4	4.52	.0025
RBR 1310	1-5/16	4.98	.0025
RBR 1370	1-3/8	5.47	.0025
RBR 1430	1-7/16	5.98	.0025
RBR 1500	1-1/2	6.51	.0025
RBR 1560	1-9/16	7.06	.0025
RBR 1620	1-5/8	7.64	.0025
RBR 1680	1-11/16	8.24	.0025
RBR 1750	1-3/4	8.86	.0025
RBR 1810	1-13/16	9.51	.0025
RBR 1870	1-7/8	10.2	.0025
RBR 1930	1-15/16	10.9	.0025
RBR 2000	2	11.6	.0025
RBR 2120	2-1/8	13.1	.003
RBR 2150	2-5/32	13.4	.003
RBR 2250	2-1/4	14.6	.003
RBR 2370	2-3/8	16.3	.004
RBR 2430	2-7/16	17.2	.004
RBR 2500	2-1/2	18.1	.004
RBR 2620	2-5/8	19.9	.004
RBR 2750	2-3/4	21.9	.004
RBR 2870	2-7/8	23.9	.004
RBR 3000	3	26.0	.005
RBR 3120	3-1/8	28.2	.005
RBR 3250	3-1/4	30.6	.005
RBR 3500	3-1/2	35.4	.005
RBR 3620	3-5/8	38.0	.005
RBR 3750	3-3/4	40.7	.006
RBR 4000	4	46.3	.006
RBR 4250	4-1/4	52.3	.006
RBR 4500	4-1/2	58.6	.007
RBR 4750	4-3/4	65.3	.007
RBR 5000	5	72.3	.008
RBR 5500	5-1/2	87.5	.008
RBR 6000	6	104	.009
RBR 6250	6-1/4	113	.009
RBR 6500	6-1/2	122	.010
RBR 7000	7	142	.010
RBR 7500	7-1/2	164	.011
RBR 8000	8	185	.012
RBR 9000	9	234	.014
RBR 1100	10	289	.015
RBR 1110	11	350	.017
RBR 1200	12	416	.018

Hexagon Free-Cutting Brass Rod



Hexagon

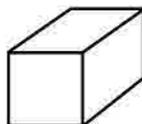
Screw Machine Quality

12 Foot Lengths UNS-C36000

Item Number	Dim. "A" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
HBR 062	1/16	.0125	.0025
HBR 093	3/32	.0280	.0025
HBR 125	1/8	.0499	.0025
HBR 156	5/32	.0779	.003
HBR 187	3/16	.112	.003
HBR 218	7/32	.153	.003
HBR 250	1/4	.199	.003
HBR 281	9/32	.252	.003
HBR 312	5/16	.312	.003
HBR 343	11/32	.377	.003
HBR 375	3/8	.449	.003
HBR 406	13/32	.527	.003
HBR 437	7/16	.611	.003
HBR 468	15/32	.701	.003
HBR 500	1/2	.798	.003
HBR 562	9/16	1.01	.004
HBR 593	19/32	1.13	.004
HBR 625	5/8	1.25	.004
HBR 687	11/16	1.51	.004
HBR 750	3/4	1.80	.004
HBR 812	13/16	2.11	.004
HBR 875	7/8	2.44	.004
HBR 937	15/16	2.80	.004
HBR 1000	1	3.19	.004

Item Number	Dim. "A" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
HBR 1070	1-1/16	3.60	.005
HBR 1120	1-1/8	4.04	.005
HBR 1180	1-3/16	4.50	.005
HBR 1220	1-1/4	4.99	.005
HBR 1310	1-5/16	5.50	.005
HBR 1370	1-3/8	6.03	.005
HBR 1430	1-7/16	6.59	.005
HBR 1500	1-1/2	7.18	.005
HBR 1560	1-9/16	7.79	.005
HBR 1620	1-5/8	8.43	.005
HBR 1680	1-11/16	9.09	.005
HBR 1750	1-3/4	9.77	.005
HBR 1810	1-13/16	10.5	.005
HBR 1870	1-7/8	11.2	.005
HBR 1930	1-15/16	12.0	.005
HBR 2000	2	12.8	.005
HBR 2120	2-1/8	14.4	.006
HBR 2250	2-1/4	16.2	.007
HBR 2370	2-3/8	18.0	.007
HBR 2500	2-1/2	19.9	.008
HBR 2620	2-5/8	22.0	.008
HBR 2750	2-3/4	24.1	.008
HBR 2870	2-7/8	26.4	.009
HBR 3000	3	28.7	.009
HBR 3120	3-1/8	31.2	.010
HBR 3250	3-1/4	33.7	.010
HBR 3500	3-1/2	39.1	.011
HBR 3750	3-3/4	44.9	.011
HBR 4000	4	51.1	.012

Square Free-Cutting Brass Bar



Square

Screw Machine Quality

12 Foot Lengths UNS-C36000

Item Number	Dim. "A" Inches	Lbs. Per Foot	Tolerance
			Dim. "A" (+ & -)
SBB 093	3/32	.0324	.002
SBB 125	1/8	.0576	.002
SBB 156	5/32	.0899	.003
SBB 187	3/16	.130	.003
SBB 218	7/32	.176	.0035
SBB 250	1/4	.230	.0035
SBB 312	5/16	.360	.0035
SBB 375	3/8	.518	.0035
SBB 437	7/16	.705	.0035
SBB 500	1/2	.921	.0035
SBB 562	9/16	1.17	.0045
SBB 625	5/8	1.44	.0045
SBB 687	11/16	1.74	.0045
SBB 750	3/4	2.07	.0045
SBB 812	13/16	2.43	.0045
SBB 875	7/8	2.82	.0045
SBB 937	15/16	3.24	.0045
SBB 1000	1	3.68	.0045

Item Number	Dim. "A" Inches	Lbs. Per Foot	Tolerance
			Dim. "A" (+ & -)
SBB 1120	1-1/8	4.66	.005
SBB 1220	1-1/4	5.76	.005
SBB 1370	1-3/8	6.97	.005
SBB 1500	1-1/2	8.29	.005
SBB 1620	1-5/8	9.73	.005
SBB 1750	1-3/4	11.3	.005
SBB 2000	2	14.7	.005
SBB 2120	2-1/8	16.6	.006
SBB 2220	2-1/4	18.7	.007
SBB 2500	2-1/2	23.0	.008
SBB 2750	2-3/4	27.9	.008
SBB 3000	3	33.2	.009
SBB 3500	3-1/2	45.1	.011
SBB 4000	4	58.9	.012
SBB 4220	4-1/4	66.5	.013
SBB 4500	4-1/2	74.6	.014

For sizes not available from stock, we can obtain prompt delivery from our mill sources.

Rectangular Free-Cutting Brass Bar



Rectangle

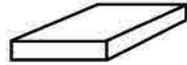
Screw Machine Quality

12 Foot Lengths UNS-C36000

Item Number	Dim. "A"	Dim. "B"	Lbs. Per Foot	Tolerance (+ & -)	
	Inches	Inches		Dim. "A"	Dim. "B"
RBB 062 250	1/16 x	1/4	.057	.0015	.0035
RBB 062 375		3/8	.086	.0015	.0035
RBB 062 500		1/2	.115	.0015	.0035
RBB 062 625		5/8	.144	.002	.005
RBB 062 750		3/4	.172	.002	.005
RBB 062 100		1	.230	.002	.005
RBB 062 112		1-1/4	.287	.002	.005
RBB 062 150		1-1/2	.345	.003	.008
RBB 062 200		2	.459	.0025	.010
RBB 093 375	3/32 x	3/8	.129	.002	.0035
RBB 093 500		1/2	.171	.002	.0035
RBB 093 625		5/8	.214	.0025	.005
RBB 093 750		3/4	.258	.0025	.005
RBB 093 100		1	.343	.0025	.005
RBB 093 112		1-1/4	.428	.0025	.005
RBB 093 150		1-1/2	.514	.0035	.008
RBB 125 187	1/8 x	3/16	.0863	.002	.003
RBB 125 250		1/4	.115	.002	.0035
RBB 125 312		5/16	.144	.002	.0035
RBB 125 375		3/8	.172	.002	.0035
RBB 125 500		1/2	.230	.002	.0035
RBB 125 625		5/8	.287	.0025	.005
RBB 125 750		3/4	.344	.0025	.005
RBB 125 875		7/8	.402	.0025	.005
RBB 125 100		1	.459	.0025	.005
RBB 125 112		1-1/4	.574	.0025	.005
RBB 125 137		1-3/8	.633	.0035	.008
RBB 125 150		1-1/2	.689	.0035	.008
RBB 125 175		1-3/4	.803	.0035	.008
RBB 125 200		2	.918	.0035	.008
RBB 125 225		2-1/4	1.03	.004	.012
RBB 125 252		2-1/2	1.15	.004	.012
RBB 125 300		3	1.38	.004	.012
RBB 125 400		4	1.84	.004	.012
RBB 187 250	3/16 x	1/4	.172	.003	.0035
RBB 187 312		5/16	.217	.003	.0035
RBB 187 375		3/8	.258	.003	.0035
RBB 187 500		1/2	.344	.003	.0035
RBB 187 625		5/8	.430	.0035	.005
RBB 187 750		3/4	.516	.0035	.005
RBB 187 875		7/8	.602	.0035	.005
RBB 187 100		1	.688	.0035	.005
RBB 187 112		1-1/8	.777	.0035	.005
RBB 187 125		1-1/4	.860	.0035	.005
RBB 187 150		1-1/2	1.03	.004	.008
RBB 187 175		1-3/4	1.20	.004	.008
RBB 187 2000		2	1.38	.004	.008
RBB 187 2250		2-1/4	1.55	.0045	.012
RBB 187 2500		2-1/2	1.72	.0045	.012
RBB 187 3000		3	2.07	.0045	.012
RBB 187 3500		3-1/2	2.41	.0045	.012
RBB 187 4000		4	2.75	.0045	.012

Item Number	Dim. "A"	Dim. "B"	Lbs. Per Foot	Tolerance (+ & -)	
	Inches	Inches		Dim. "A"	Dim. "B"
RBB 250 312	1/4 x	5/16	.287	.0035	.0035
RBB 250 375		3/8	.344	.0035	.0035
RBB 250 500		1/2	.459	.0035	.0035
RBB 250 625		5/8	.574	.004	.005
RBB 250 750		3/4	.688	.004	.005
RBB 250 875		7/8	.803	.004	.005
RBB 250 100		1	.918	.004	.005
RBB 250 112		1-1/8	1.04	.004	.005
RBB 250 125		1-1/4	1.15	.004	.005
RBB 250 150		1-1/2	1.38	.0045	.008
RBB 250 175		1-3/4	1.61	.0045	.008
RBB 250 2000		2	1.84	.0045	.008
RBB 250 2250		2-1/4	2.07	.0045	.012
RBB 250 2500		2-1/2	2.30	.0045	.012
RBB 250 2750		2-3/4	2.53	.0045	.012
RBB 250 3000		3	2.75	.0045	.012
RBB 250 3500		3-1/2	3.21	.0045	.012
RBB 250 4000		4	3.67	.0045	.012
RBB 250 5000		5	4.61	.006	.015
RBB 250 6000		6	5.51	.006	.018
RBB 312 375	5/16 x	3/8	.430	.0035	.0035
RBB 312 500		1/2	.574	.0035	.0035
RBB 312 625		5/8	.717	.004	.005
RBB 312 750		3/4	.861	.004	.005
RBB 312 875		7/8	1.00	.004	.005
RBB 312 100		1	1.15	.004	.005
RBB 312 125		1-1/4	1.43	.004	.005
RBB 312 150		1-1/2	1.72	.0045	.008
RBB 312 175		1-3/4	2.01	.0045	.008
RBB 312 2000		2	2.30	.0045	.008
RBB 312 2500		2-1/2	2.87	.0045	.012
RBB 312 2750		2-3/4	3.17	.0045	.012
RBB 312 3000		3	3.44	.0045	.012
RBB 312 3500		3-1/2	4.01	.0045	.012
RBB 312 4000		4	4.61	.0045	.012
RBB 312 4500		4-1/2	5.18	.006	.014
RBB 375 500	3/8 x	1/2	.668	.0035	.0035
RBB 375 625		5/8	.861	.004	.005
RBB 375 750		3/4	1.03	.004	.005
RBB 375 875		7/8	1.20	.004	.005
RBB 375 100		1	1.38	.004	.005
RBB 375 112		1-1/8	1.55	.004	.005
RBB 375 125		1-1/4	1.72	.004	.005
RBB 375 150		1-1/2	2.07	.0045	.008
RBB 375 175		1-3/4	2.41	.0045	.008
RBB 375 2000		2	2.75	.0045	.008
RBB 375 2250		2-1/4	3.09	.0045	.012
RBB 375 2500		2-1/2	3.44	.0045	.012
RBB 375 2750		2-3/4	3.80	.0045	.012
RBB 375 3000		3	4.13	.0045	.012
RBB 375 3500		3-1/2	4.82	.0045	.012
RBB 375 4000		4	5.51	.0045	.012
RBB 375 4500		4-1/2	6.22	.006	.013
RBB 375 5000		5	6.88	.006	.015
RBB 375 6000		6	8.26	.006	.018

Rectangular Free-Cutting Brass Bar



Rectangle

Screw Machine Quality

12 Foot Lengths (Continued) UNS-C36000

Item Number	Dim. "A"	Dim. "B"	Lbs. Per Foot	Tolerance (+ & -)	
	Inches	Inches		Dim. "A"	Dim. "B"
RBB 437 750	7/16 x	3/4	1.20	.004	.005
RBB 437 100		1	1.61	.004	.005
RBB 437 125		1-1/4	2.36	.004	.005
RBB 500 625	1/2 x	5/8	1.15	.004	.005
RBB 500 750		3/4	1.38	.004	.005
RBB 500 875		7/8	1.61	.004	.005
RBB 500 100		1	1.84	.004	.005
RBB 500 125		1-1/4	2.30	.004	.005
RBB 500 137		1-3/8	2.53	.0045	.008
RBB 500 150		1-1/2	2.76	.0045	.008
RBB 500 175		1-3/4	3.22	.0045	.008
RBB 500 2000		2	3.67	.0045	.008
RBB 500 2250		2-1/4	4.13	.0045	.012
RBB 500 2500		2-1/2	4.59	.0045	.012
RBB 500 3000		3	5.51	.0045	.012
RBB 500 3500		3-1/2	6.43	.0045	.012
RBB 500 4000		4	7.34	.0045	.012
RBB 500 4500		4-1/2	8.29	.006	.013
RBB 500 5000		5	9.18	.006	.015
RBB 500 6000		6	11.0	.006	.018
RBB 625 750	5/8 x	3/4	1.72	.0045	.005
RBB 625 875		7/8	2.01	.0045	.005
RBB 625 100		1	2.30	.0045	.005
RBB 625 125		1-1/4	2.87	.0045	.005
RBB 625 137		1-3/8	3.17	.005	.008
RBB 625 150		1-1/2	3.45	.005	.008
RBB 625 175		1-3/4	4.02	.005	.008
RBB 625 200		2	4.59	.005	.008
RBB 625 225		2-1/4	5.18	.005	.012
RBB 625 250		2-1/2	5.74	.005	.012
RBB 625 300		3	6.90	.005	.012
RBB 625 400		4	9.18	.005	.012
RBB 625 600		6	13.8	.007	.018
RBB 750 875	3/4 x	7/8	2.42	.0045	.005
RBB 750 100		1	2.75	.0045	.005
RBB 750 125		1-1/4	3.44	.0045	.005
RBB 750 150		1-1/2	4.13	.005	.008
RBB 750 175		1-3/4	4.82	.005	.008
RBB 750 200		2	5.50	.005	.008
RBB 750 225		2-1/4	6.22	.005	.012
RBB 750 250		2-1/2	6.88	.005	.012
RBB 750 300		3	8.26	.005	.012
RBB 750 350		3-1/2	9.67	.005	.012
RBB 750 400		4	11.0	.005	.012
RBB 750 500		5	13.8	.007	.015
RBB 750 600		6	16.5	.007	.018
RBB 875 100	7/8 x	1	3.21	.0045	.005
RBB 875 125		1-1/4	4.03	.0045	.005

Item Number	Dim. "A"	Dim. "B"	Lbs. Per Foot	Tolerance (+ & -)	
	Inches	Inches		Dim. "A"	Dim. "B"
RBB 875 150	7/8 x	1-1/2	4.84	.005	.008
RBB 875 200		2	6.42	.005	.008
RBB 875 250		2-1/2	8.06	.005	.012
RBB 875 300		3	9.68	.005	.012
RBB 875 400		4	12.8	.005	.012
RBB 100 125	1 x	1-1/4	4.59	.0045	.005
RBB 100 150		1-1/2	5.51	.005	.008
RBB 100 175		1-3/4	6.43	.005	.008
RBB 100 200		2	7.34	.005	.008
RBB 100 225		2-1/4	8.26	.005	.012
RBB 100 250		2-1/2	9.18	.005	.012
RBB 100 300		3	11.0	.005	.012
RBB 100 350		3-1/2	12.8	.005	.012
RBB 100 400		4	14.7	.005	.012
RBB 100 500		5	18.4	.007	.015
RBB 100 600		6	22.0	.007	.018
RBB 125 1500	1-1/4 x	1-1/2	6.89	.005	.008
RBB 125 1750		1-3/4	8.06	.005	.008
RBB 125 2000		2	9.18	.005	.008
RBB 125 2250		2-1/4	10.2	.006	.012
RBB 125 2500		2-1/2	11.5	.006	.012
RBB 125 3000		3	13.8	.006	.012
RBB 125 3500		3-1/2	16.1	.006	.012
RBB 125 4000		4	18.4	.006	.012
RBB 125 5000		5	23.0	.008	.015
RBB 150 175	1-1/2 x	1-3/4	9.67	.005	.008
RBB 150 200		2	11.0	.005	.008
RBB 150 225		2-1/4	12.4	.006	.012
RBB 150 250		2-1/2	13.8	.006	.012
RBB 150 300		3	16.5	.006	.012
RBB 150 400		4	22.0	.006	.012
RBB 150 600		6	33.0	.008	.018
RBB 175 200	1-3/4 x	2	12.8	.005	.008
RBB 175 250		2-1/2	16.1	.006	.012
RBB 175 300		3	19.3	.006	.012
RBB 200 250	2 x	2-1/2	18.4	.006	.012
RBB 200 300		3	22.0	.006	.012
RBB 200 350		3-1/2	25.8	.006	.012
RBB 200 400		4	29.4	.006	.012
RBB 250 300	2-1/2 x	3	27.5	.008	.012
RBB 250 350		3-1/2	32.2	.008	.012

Sheet and Plate

Half Hard Brass

70/30 ASTM B36, C26000



Sheet & Plate

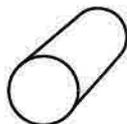
Standard Full Sheet 36" x 96"

Thickness Inches	Width Inches	Lbs. Per Square Foot	Lbs. Per Sheet
.020	36	.886	21.2
.025	36	1.12	26.8
.032	36	1.41	33.8
.040	36	1.78	42.7
.051	36	2.25	54.0
.064	36	2.82	67.6
.081	36	3.56	85.4
.091	36	4.00	96.0
(1/8) .125	36	5.51	132.2
(3/16) .187	36	8.26	198.2
(1/4) .250	36	11.1	266
(3/8) .375	36	16.6	399
(1/2) .500	36	22.2	532

Cut to Size – Order only what you need.

Round Bar Naval Brass

C46400



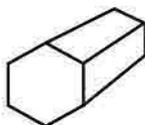
Solid Round

Size	Lbs. Per Inch
1/8	.00375
3/16	.00858
1/4	.01508
5/16	.02358
3/8	.03392
7/16	.046167
1/2	.06025
9/16	.07633
5/8	.09417
11/16	.11392
3/4	.13558
13/16	.15917
7/8	.18467
1	.24117
1-1/8	.30517
1-1/4	.37675
1-3/8	.44592
1-1/2	.54258
1-5/8	.63675
1-11/16	.68667
1-3/4	.7385

Size	Lbs. Per Inch
1-7/8	.8478
2	.9646
2-1/8	1.0890
2-1/4	1.2058
2-3/8	1.3602
2-1/2	1.5072
2-5/8	1.6616
2-3/4	1.8237
3	2.1703
3-1/4	2.5471
3-1/2	2.9540
3-3/4	3.3911
4	3.8583
4-1/2	4.8831
5	6.0286
5-1/2	7.2945
6	8.6811
6-1/2	10.1883
7	11.8159
7-1/2	13.5643
8	15.4330

Hexagon Bar Naval Brass

C46400



Hexagon

Size	Lbs. Per Foot
3/8	0.444
1/2	0.790
5/8	1.234
3/4	1.777
7/8	2.418
1	3.159
1-1/8	3.998
1-1/4	4.936
1-3/8	5.972
1-1/2	7.103
1-5/8	8.341
1-3/4	9.674
1-7/8	11.105
2	12.635
2-1/4	15.991
2-1/2	19.743
3	28.429

Plate Hot Rolled Naval Brass

C46400, ASTM B171,
ASTM SB-171, QQB-6



Sheet & Plate

Thickness	Lb. Per Inch	Size 1	Size 2	Size 3
.064	.2445	48 x 120	-	-
.080	.3056	48 x 120	-	-
.090	.3438	48 x 120	-	-
1/8	.4775	48 x 120	-	-
3/16	.6844	48 x 120	-	-
1/4	.9125	60 x 120	48 x 120	48 x 144
3/8	1.3686	96 x 168	60 x 120	48 x 144
1/2	1.8250	96 x 168	60 x 120	48 x 144
5/8	2.2813	96 x 192	60 x 120	60 x 120
3/4	2.7375	60 x 120	48 x 120	-
1	3.650	60 x 120	48 x 120	-
1-1/4	4.5635	60 x 120	48 x 120	-
1-1/2	5.4755	60 x 120	48 x 120	-
1-3/4	6.3885	60 x 120	48 x 120	-
2	7.3005	60 x 120	48 x 120	-
2-1/4	8.2135	60 x 120	48 x 120	-
2-5/8	9.5815	60 x 120	48 x 120	-
3	10.950	60 x 120	48 x 120	-
3-1/8	11.406	60 x 120	-	-
3-1/4	11.863	60 x 120	-	-
3-5/8	13.231	48 x 120	-	-
4	14.875	60 x 120	-	-

BEARING BRONZE



Continuous Cast Bronze

CDA 932, SAE 660, ASTM-B505



Please Note: This is a reference list of sizes readily available from stock – sizes not shown can be manufactured as required.

Typical Mechanical Properties* CDA 932 (SAE 660) Bronze Bars

Chemical Composition

Copper	83%
Tin.....	7%
Lead.....	7%
Zinc.....	3%
Tensile Strength	44,000 PSI
Yield Strength	27,000 PSI
Elongation in 2 inches.....	16%
Brinell Number at 500 KG Load.....	72

Equivalent Specifications:

CDA 932, SAE 660, ASTM B505, QQ-C390A

Bronze Tubes

Continuous Cast

Stock Sizes and approximate weights per inch.

Finish Allowances

Actual sizes provide approximate allowances for finish as follows:

Outside Diameter..... Finish I.D. & O.D.

0 – 4".....	1/32"
4 – 5".....	1/16"
5 – 9".....	3/32"

Continuous Cast Bronze

CDA 932, SAE 660, ASTM-B505



Solid

Remember: Look for your finished size. Don't buy what you don't need. If you have any questions contact our Sales Department.

The weights listed here are the very best estimates of the actual weights we will ship. They are a combination of calculated theoretical weights and an average of actual weights shipped. We have attempted to be slightly conservative, staying to the heavy side so that you will be able to calculate your costs conservatively. Naturally there will be slight variations in weight from bar to bar.

I.D.	O.D.	Item Number	Weight Per Inch	
Solid Bars	1/2	105758	.077	
	5/8	105759	.114	
	3/4	105760	.162	
	7/8	105761	.219	
1	1	105764	.276	
	1-1/8	105765	.352	
	1-1/4	105762	.438	
	1-3/8	105763	.524	
	1-1/2	105766	.619	
	1-5/8	105767	.715	
	1-3/4	105768	.819	
	1-7/8	105769	.933	
	2	2	105770	1.075
		2-1/8	105771	1.209
2-1/4		105772	1.342	
2-3/8		105773	1.505	
2-1/2		105774	1.666	
2-5/8		105775	1.838	
2-3/4		105776	2.009	
2-7/8		105777	2.190	
3	3	105778	2.371	
	3-1/4	105779	2.771	
	3-1/2	105780	3.238	
	3-3/4	105781	3.733	

I.D.	O.D.	Item Number	Weight Per Inch
Solid Bars	4	105782	4.276
	4-1/4	105783	4.828
	4-1/2	105784	5.380
	4-3/4	105785	5.999
	5	105786	6.629
	5-1/2	105787	8.105
	6	105788	9.629
	6-1/2	105789	11.333
	7	105790	13.028
	7-1/2	105791	14.838
	8	105792	16.914
	9	105794	21.380
10	-	26.942	
11	-	31.447	
12	-	37.809	
13	-	44.066	
14	-	51.371	
15	-	58.819	
16	-	66.800	
18	-	84.238	
20	-	103.810	

Continuous Cast Bronze

CDA 932, SAE 660, ASTM-B505



Cored Bar

Remember: Look for your finished size. Don't buy what you don't need. If you have any questions contact our Sales Department.

The weights listed here are the very best estimates of the actual weights we will ship. They are a combination of calculated theoretical weights and an average of actual weights shipped. We have attempted to be slightly conservative, staying to the heavy side so that you will be able to calculate your costs conservatively. Naturally there will be slight variations in weight from bar to bar.

I.D.	O.D.	Item Number	Weight Per Inch
Tubes			
1/2	1	105308	.228
	1-1/8	105309	.295
	1-1/4	105310	.371
	1-3/8	105311	.457
	1-1/2	105312	.561
	1-3/4	105313	.761
	2	105314	1.009
5/8	1	105324	.190
	1-1/8	105325	.266
	1-1/4	105326	.343
	1-3/8	105327	.428
	1-1/2	105329	.524
	1-3/4	105330	.733
	2	105331	.971
3/4	1	105339	.143
	1-1/8	105341	.229
	1-1/4	105342	.305
	1-3/8	105343	.390
	1-1/2	105344	.486
	1-5/8	105345	.591
	1-3/4	105346	.695
	2	105348	.943
	2-1/8	105349	1.007
	2-1/4	105350	1.220
	2-1/2	105351	1.534
	2-3/4	105352	1.886

I.D.	O.D.	Item Number	Weight Per Inch
Tubes			
7/8	1-1/4	105360	.248
	1-3/8	105361	.343
	1-1/2	105362	.439
	1-5/8	105363	.543
	1-3/4	105364	.648
	1-7/8	105365	.762
	2	105366	.896
	2-1/4	105368	1.162
	1	1-1/4	105373
1-3/8		105375	.286
1-1/2		105376	.381
1-5/8		105377	.486
1-3/4		105378	.591
1-7/8		105379	.695
2		105380	.839
2-1/8		105381	.972
2-1/4		105382	1.115
2-1/2		105384	1.420
2-3/4		105385	1.772
3		105386	2.143
3-1/4		105387	2.543
3-1/2		105388	3.010
4		105389	4.115

Continuous Cast Bronze

CDA 932, SAE 660, ASTM-B505



Cored Bar

Remember: Look for your finished size. Don't buy what you don't need. If you have any questions contact our Sales Department.

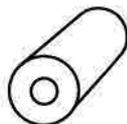
The weights listed here are the very best estimates of the actual weights we will ship. They are a combination of calculated theoretical weights and an average of actual weights shipped. We have attempted to be slightly conservative, staying to the heavy side so that you will be able to calculate your costs conservatively. Naturally there will be slight variations in weight from bar to bar.

I.D.	O.D.	Item Number	Weight Per Inch
1-1/8	1-5/8	105396	.410
	1-3/4	105397	.515
	1-7/8	105398	.629
	2	105399	.762
	2-1/8	105400	.905
	2-1/4	105401	1.048
	2-3/8	105402	1.200
	2-1/2	105403	1.353
	2-3/4	105404	1.705
	1-1/4	1-1/2	105411
1-5/8		105413	.343
1-3/4		105415	.458
1-7/8		105416	.572
2		105417	.696
2-1/8		105418	.829
2-1/4		105419	.972
2-3/8		105420	1.124
2-1/2		105421	1.296
2-3/4		105423	1.639
3		105425	2.001
3-1/4		105426	2.410
3-1/2		105427	2.858
4		105428	3.905
1-3/8		1-5/8	105431
	1-3/4	105432	.372
	1-7/8	105433	.486
	2	105434	.620
	2-1/8	105435	.753
	2-1/4	105436	.896
	2-3/8	105437	1.048
	2-1/2	105438	1.210
	2-5/8	105439	1.372
	2-3/4	105440	1.560
	3	105441	1.924
1-1/2	1-3/4	105449	.277
	1-7/8	105450	.390
	2	105451	.534
	2-1/8	105452	.667
	2-1/4	105453	.802
	2-3/8	105454	.953
	2-1/2	105455	1.124
	2-5/8	105456	1.296
	2-3/4	105457	1.467
	3	105458	1.839
	3-1/4	105459	2.229
	3-1/2	105460	2.696
	3-3/4	105461	3.181
	4	105462	3.801
4-1/2	105463	4.886	

I.D.	O.D.	Item Number	Weight Per Inch	
1-5/8	2	105466	.430	
	2-1/8	105467	.572	
	2-1/4	105468	.705	
	2-3/8	105469	.858	
	2-1/2	105470	1.020	
	2-5/8	105471	1.191	
	2-3/4	105472	1.372	
	3	105473	1.724	
	1-3/4	2	105480	.330
		2-1/8	105481	.460
2-1/4		105482	.601	
2-3/8		105483	.753	
2-1/2		105484	.961	
2-5/8		105485	1.086	
2-3/4		105486	1.258	
2-7/8		105487	1.439	
3		105488	1.639	
3-1/4		105489	2.040	
3-1/2		105490	2.515	
1-7/8	2-1/4	105495	.480	
	2-3/8	105496	.648	
	2-1/2	105497	.810	
	2-5/8	105498	.972	
	2-3/4	105499	1.134	
	2-7/8	105500	1.320	
	3	105501	1.515	
2	3-1/4	105502	1.930	
	2-1/4	105509	.362	
	2-1/2	105511	.686	
	2-5/8	105512	.848	
	2-3/4	105513	1.029	
	2-7/8	105514	1.210	
	3	105515	1.401	
	3-1/4	105516	1.820	
	3-1/2	105517	2.248	
	3-3/4	105518	2.743	
	4	105519	3.362	
2	4-1/2	105520	4.458	
	5	105521	5.686	
	5-1/2	105522	7.191	
	6	105523	8.724	

Continuous Cast Bronze

CDA 932, SAE 660, ASTM-B505



Cored Bar

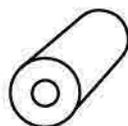
Stock sizes and approximate weights per inch.

I.D.	O.D.	Item Number	Weight Per Inch
2-1/8	2-5/8	105525	.720
	2-3/4	105526	.900
	2-7/8	105527	1.100
	3	105528	1.270
	3-1/4	105529	1.690
	3-1/2	105530	2.060
	3-3/4	105531	2.550
2-1/4	2-3/4	105539	.740
	2-7/8	105540	.950
	3	105541	1.130
	3-1/8	105542	1.340
	3-1/4	105543	1.520
	3-1/2	105544	2.020
	3-3/4	105545	2.460
	4	105546	3.080
4-1/4	105547	3.620	
2-3/8	2-3/4	105548	.580
	2-7/8	105549	.801
	3	105550	.981
	3-1/4	105551	1.391
	3-1/2	105552	1.848
	3-3/4	105553	2.334
4	105554	2.915	
2-1/2	3	105561	.830
	3-1/8	105562	1.039
	3-1/4	105563	1.239
	3-1/2	105564	1.686
	3-3/4	105565	2.162
	4	105566	2.772
	4-1/4	105567	3.334
	4-1/2	105568	3.905
	4-3/4	105569	4.524
	5	105570	5.124
	5-1/2	105571	6.648
	6	105572	8.105
2-5/8	3-1/2	105575	1.543
	3-3/4	105576	2.001
	4	105577	2.572
	4-1/2	105578	3.640
2-3/4	3-1/2	105582	1.353
	3-3/4	105583	1.848
	4	105584	2.429
	4-1/4	105585	2.981
	4-1/2	105586	3.572
	4-3/4	105587	4.190
2-7/8	4	105590	2.277

I.D.	O.D.	Item Number	Weight Per Inch	
3	3-1/2	105593	.991	
	3-3/4	105595	1.486	
	4	105596	2.115	
	4-1/4	105597	2.639	
	4-1/2	105598	3.191	
	4-3/4	105599	3.810	
	5	105600	4.458	
	5-1/2	105601	5.953	
	6	105602	7.477	
	6-1/2	105603	9.096	
	7	105744	10.716	
	3-1/4	4	105605	1.686
		4-1/4	105606	2.239
4-1/2		105607	2.810	
4-3/4		105608	3.429	
5		105609	4.048	
5-1/2		105715	5.553	
6	105745	6.909		
3-1/2	4	105612	1.287	
	4-1/4	105614	1.801	
	4-1/2	105615	2.381	
	4-3/4	105616	3.010	
	5	105617	3.620	
	5-1/2	105618	5.096	
	6	105619	6.629	
6-1/2	105620	8.324		
3-3/4	4-1/4	105621	1.375	
	4-1/2	105622	1.943	
	4-3/4	105623	2.562	
	5	105624	3.191	
	5-1/2	105625	4.667	
	6	105626	6.201	
4	4-1/2	105627	1.448	
	4-3/4	105628	2.067	
	5	105629	2.686	
	5-1/4	105707	3.410	
	5-1/2	105630	4.172	
	6	105631	5.714	
	6-1/2	105632	7.401	
	7	105633	9.096	
7-1/2	105634	10.953		
8	105708	13.288		

Continuous Cast Bronze

CDA 932, SAE 660, ASTM-B505



Cored Bar

Stock sizes and approximate weights per inch.

I.D.	O.D.	Item Number	Weight Per Inch
4-1/4	5	105636	2.247
	5-1/4	105709	2.952
	5-1/2	105637	3.667
	5-3/4	105713	4.221
	6	105638	5.181
	6-1/2	105710	6.858
4-1/2	5	105639	1.629
	5-1/4	105718	2.216
	5-1/2	105640	3.153
	5-3/4	105719	3.660
	6	105641	4.639
	6-1/2	105642	6.286
	7	105643	7.981
4-3/4	5-1/4	105720	1.623
	5-1/2	105721	2.329
	5-3/4	105711	3.335
	6	105644	4.077
	6-1/2	105645	5.753
	7	105716	7.500
	5	5-1/2	105646
5-3/4		105723	2.443
6		105647	3.401
6-1/4		105724	4.017
6-1/2		105648	5.096
6-3/4		105725	5.723
7		105649	8.791
7-1/2		105650	8.858
8		105651	10.677
8-1/2		105726	12.713
9		105712	15.191
5-1/4	5-3/4	105727	1.785
	6	105728	2.557
	6-1/4	105729	3.359
	7	105633	6.200
	7-1/2	105654	8.120
5-1/2	6	105730	1.868
	6-1/4	105731	2.670
	6-1/2	105655	3.848
	7	105656	5.601
	7-1/2	105657	7.429
	8	105658	9.429
5-3/4	6-1/4	105732	1.947
	6-1/2	105733	2.785
	6-3/4	105713	3.943
	7	105734	4.554
	7-1/2	105662	6.696
	8	105663	10.868
	8-1/2	105714	10.995

I.D.	O.D.	Item Number	Weight Per Inch	
6	6-1/2	105735	2.030	
	6-3/4	105717	3.171	
	7	105664	4.143	
	7-1/2	105665	5.962	
	8	105666	8.078	
	8-1/2	105667	10.229	
	9	105668	12.515	
	10	-	17.466	
	11	-	22.896	
	12	-	28.857	
	6-1/2	7-1/2	105672	4.410
		8	105673	6.601
9		105675	11.001	
7	7-1/2	105736	2.354	
	7-3/4	105737	3.354	
	8	105679	4.676	
	8-1/2	105738	6.600	
	9	105680	9.239	
7-1/2	8	105739	2.520	
	8-1/4	105750	3.580	
	8-1/2	105685	4.670	
	9	105686	6.964	
7-3/4	8-1/2	105740	3.694	
	9	105741	5.982	
	9-1/2	-	11.657	
	10	-	14.162	
	11	-	19.686	
	12	-	25.648	
8	9	105690	5.258	
	9-1/4	-	6.657	
	9-1/2	-	7.895	
	10	-	10.419	
	10-1/2	-	13.048	
	11	-	15.848	
	12	-	21.848	
	13	-	28.820	
8-1/2	9	105691	2.840	
	9-1/2	-	5.971	
	10	-	8.314	
	10-1/2	-	11.019	
	11-1/2	-	17.067	
9	10	-	6.295	
	10-1/4	-	7.448	
	10-1/2	-	8.838	
	11	-	11.562	
	11-1/2	-	14.457	
	12	-	17.486	

Continuous Cast Bronze

CDA 932, SAE 660, ASTM-B505



Cored Bar

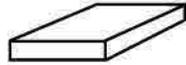
Stock sizes and approximate weights per inch.

I.D.	O.D.	Item Number	Weight Per Inch
9-1/2	10-1/2	-	6.657
	11	-	9.248
	11-1/2	-	12.152
	12-1/2	-	18.723
10	11	-	7.067
	11-1/2	-	9.828
	12	-	12.695
	13	-	19.543
	14	-	26.505
	15	-	34.143
10-1/2	11-1/2	-	7.267
	12	-	10.152
	12-1/2	-	13.683
	13	-	17.886
11	12	-	7.619
	12-1/2	-	11.114
	13	-	14.286
	14	-	21.219
11-1/2	13	-	11.457
	13-1/2	-	14.819
	14-1/2	-	22.114

I.D.	O.D.	Item Number	Weight Per Inch
12	13-1/2	-	11.971
	14	-	15.495
	15	-	22.943
12-1/2	14	-	12.343
13	14-1/2	-	13.257
	15	-	16.609
	16	-	25.733
13-1/2	15	-	14.476
	15-1/2	-	17.124
14	15-1/2	-	13.857
	16	-	18.105
	17	-	26.819
15	17	-	19.467
	18	-	29.286
16	18	-	22.038
	19	-	30.162
	20	-	41.429
	17	19	-
17	20	-	33.095
	18	20	-

Continuous Cast Bronze

CDA 932, SAE 660, ASTM-B505



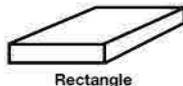
Rectangle

TH	x	W	Weight Per Inch
1/4	x	4	.472
		8	.979
		12	1.493
3/8	x	4	.639
		8	1.299
		12	1.965
1/2	x	1	.229
		2	.437
		3	.646
		4	.847
		5	1.063
		6	1.236
		7	1.472
		8	1.667
		9	1.889
		10	2.090
		12	2.507
		14	2.819
15	3.062		
5/8	x	1	.284
		2	.528
		3	.778
		4	.972
		5	1.278

TH	x	W	Weight Per Inch
5/8	x	6	1.527
		7	1.778
		8	2.027
		9	2.277
		10	2.527
		12	3.027
		14	3.528
3/4	x	15	3.778
		1	.326
		2	.618
		3	.909
		4	1.201
		5	1.493
		6	1.784
		7	2.076
		8	2.368
		9	2.660
		10	2.951
		12	3.534
		14	4.118
		16	4.701
		18	5.187
1	x	1	.424
		2	.799
		3	1.174

Continuous Cast Bronze

CDA 932, SAE 660, ASTM-B505

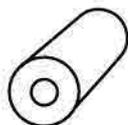


TH	X	W	Weight Per Inch		
1	x	4	1.542		
		5	1.923		
		6	2.292		
		7	2.667		
		8	3.041		
		9	3.417		
		10	3.792		
		11	4.167		
		12	4.430		
		13	4.917		
		14	5.292		
		15	5.667		
		16	6.042		
		18	6.792		
		20	7.542		
		1-1/4	x	1	.513
				2	.972
3	1.430				
4	1.889				
5	2.347				
6	2.805				
7	3.263				
8	3.722				
9	4.180				
10	4.638				
11	5.097				

TH	X	W	Weight Per Inch
1-1/4	x	12	5.548
		13	6.006
		14	6.465
		15	6.923
1-1/2	x	4	2.138
		8	4.319
		12	6.347
1-3/4	x	4	2.472
		8	4.986
		12	7.319
2	x	4	2.805
		8	5.638
		11	7.715
		12	8.298
3	x	11	11.347
4	x	4	5.458
		11	14.895
6	x	10	19.972
6-1/4	x	6-1/4	13.243
8	x	8	21.256

Centrifugal Cast Bronze

CDA 932, SAE 660, ASTM-B271



Cored Bar

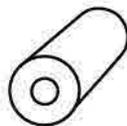
I.D.	O.D.	13" Bar WGT.	Part No.
5-1/4	9	176.69	4272
5-1/2		167.8	4472
5-3/4		158.49	4672
6-1/4		138.66	5072
6-3/4		117.21	5472
7-1/4		94.03	5872
5	9-1/4	209	4074
5-1/4		201	4274
5-1/2		192	4474
5-3/4		183	4674
6		174	4874
6-1/4		164	5074
6-1/2		154	5274
6-3/4		143	5474
7		132	5674
7-1/4		120	5874
7-1/2		109	6074
7-3/4		90	6274
8		83	6474
8-1/4		70	6674
5	9-1/2	226	4076
5-1/4		217	4276
5-1/2		208	4476
5-3/4		199	4676
6		189	4876
6-1/4		179	5076
6-1/2		169	5276
6-3/4		158	5476
7		147	5676
7-1/4		136	5876
7-1/2		124	6076
7-3/4		112	6276
8		99	6476
8-1/4		86	6676
8-1/2		79	6876
5	9-3/4	241	4078
5-1/4		233	4278
5-1/2		224	4478
5-3/4		215	4678
6		205	4878
6-1/4		195	5078
6-1/2		185	5278
6-3/4		174	5478
7		163	5678
7-1/4		152	5878
7-1/2		140	6078
7-3/4		128	6278
8		115	6478
8-1/4		102	6678
8-1/2		88	6878
8-3/4		74	7078

I.D.	O.D.	13" Bar WGT.	Part No.
5	10	257	4080
5-1/4		249	4280
5-1/2		240	4480
5-3/4		231	4680
6		222	4880
6-1/4		212	5080
6-1/2		202	5280
6-3/4		191	5480
7		180	5680
7-1/4		168	5880
7-1/2		156	6080
7-3/4		144	6280
8		131	6480
8-1/4		118	6680
8-1/2		105	6880
8-3/4		91	7080
9		78	7280
5	10-1/4	274	4082
5-1/4		266	4282
5-1/2		257	4482
5-3/4		248	4682
6		239	4882
6-1/4		229	5082
6-1/2		218	5282
6-3/4		208	5482
7		197	5682
7-1/4		185	5882
7-1/2		173	6082
7-3/4		161	6282
8		148	6482
8-1/4		137	6682
8-1/2		123	6882
8-3/4		109	7082
9		95	7282
9-1/4		80	7482
5	10-1/2	291	4084
5-1/4		283	4284
5-1/2		274	4484
5-3/4		265	4684
6		256	4884
6-1/4		246	5084
6-1/2		238	5284
6-3/4		225	5484
7		214	5684
7-1/4		202	5884
7-1/2		190	6084
7-3/4		178	6284
8		165	6484
8-1/4		152	6684
8-1/2		139	6884
8-3/4		125	7084
9		110	7284
9-1/4		95	7484
9-1/2		80	7684
5	10-3/4	309	4086
5-1/4		301	4286
5-1/2		292	4486
5-3/4		283	4686

I.D.	O.D.	13" Bar WGT.	Part No.
6	10-3/4	273	4886
6-1/4		263	5086
6-1/2		253	5286
6-3/4		242	5486
7		231	5686
7-1/4		220	5886
7-1/2		208	6086
7-3/4		196	6286
8		183	6486
8-1/4		170	6686
8-1/2		156	6886
8-3/4		142	7086
9		128	7286
9-1/4		113	7486
9-1/2		98	7686
9-3/4		82	7886
5	11	327	4088
5-1/4		319	4288
5-1/2		310	4488
5-3/4		301	4688
6		291	4888
6-1/4		281	5088
6-1/2		271	5288
6%		260	5488
7		249	5688
7 1/4		238	5888
7-1/2		226	6088
7-3/4		214	6288
8		201	6488
8-1/4		188	6688
8-1/2		174	6888
8-3/4		160	7088
9		146	7288
9-1/4		131	7488
9-1/2		116	7688
9-3/4		100	7888
10		84	8088
5	11-1/4	348	4090
5-1/4		337	4290
5-1/2		328	4490
5-3/4		319	4690
6		310	4890
6 1/4		300	5090
6-1/2		290	5290
6-3/4		279	5490
7		268	5690
7-1/4		256	5890
7-1/2		244	6090
7-3/4		232	6290
8		219	6490
8-1/4		206	6690
8-1/2		193	6890
8-3/4		179	7090
9		164	7290
9-1/4		149	7490
9-1/2		134	7690
9-3/4		119	7890
10		103	8090
10-1/4		86	8290

Centrifugal Cast Bronze

CDA 932, SAE 660, ASTM-B271



Cored Bar

I.D.	O.D.	13 [#] Bar WGT.	Part No.
5	11-1/2	367	4092
5-1/4		359	4292
5-1/2		347	4492
5-3/4		338	4692
6		329	4892
6-1/4		319	5092
6-1/2		308	5292
6-3/4		298	5492
7		287	5692
7-1/4		275	5892
7-1/2		263	6092
7-3/4		251	6292
8		238	6492
8-1/4		225	6692
8-1/2		211	6892
8-3/4		197	7092
9		183	7292
9-1/4		168	7492
9-1/2		153	7692
9-3/4		137	7892
10		121	8092
10-1/4		105	8292
10-1/2		88	8492
5	11-3/4	386	4094
5-1/4		378	4294
5-1/2		369	4494
5-3/4		357	4694
6		348	4894
6-1/4		338	5094
6-1/2		328	5294
6-3/4		317	5494
7		306	5694
7-1/4		294	5894
7-1/2		283	6094
7-3/4		270	6294
8		257	6494
8-1/4		244	6694
8-1/2		231	6894
8-3/4		217	7094
9		202	7294
9-1/4		188	7494
9-1/2		172	7694
9-3/4		157	7894
10		141	8094
10-1/4		124	8294
10-1/2		107	8494
10-3/4		90	8694
5	12	407	4096
5-1/4		398	4296
5-1/2		390	4496
5-3/4		380	4696
6		368	4896
6-1/4		358	5096
6-1/2		347	5296
6-3/4		337	5496
7		326	5696
7-1/4		314	5896
7-1/2		302	6096
7-3/4		290	6296

I.D.	O.D.	13 [#] Bar WGT.	Part No.
8	12	277	6496
8-1/4		264	6696
8-1/2		250	6896
8-3/4		238	7096
9		222	7296
9-1/4		207	7496
9-1/2		192	7696
9-3/4		176	7896
10		160	8096
10-1/4		144	8296
10-1/2		127	8496
10-3/4		110	8696
11		92	8896
5	12-1/4	427	4098
5-1/4		419	4298
5-1/2		410	4498
5-3/4		400	4698
6		392	4898
6-1/4		382	5098
6-1/2		372	5298
6-3/4		361	5498
7		350	5698
7-1/4		342	5898
7-1/2		329	6098
7-3/4		317	6298
8		304	6498
8-1/4		291	6698
8-1/2		277	6898
8-3/4		263	7098
9		250	7298
9-1/4		235	7498
9-1/2		220	7698
9-3/4		204	7898
10		187	8098
10-1/4		172	8298
10-1/2		156	8498
10-3/4		139	8698
11		121	8898
11-1/4		103	9098
5	12-1/2	447	40100
5-1/4		439	42100
5-1/2		430	44100
5-3/4		421	46100
6		412	48100
6-1/4		402	50100
6-1/2		388	52100
6-3/4		381	54100
7		368	56100
7-1/4		362	58100
7-1/2		353	60100
7-3/4		337	62100
8		324	64100
8-1/4		311	66100
8-1/2		297	68100
8-3/4		283	70100
9		263	72100
9-1/4		255	74100
9-1/2		240	76100
9-3/4		224	78100

I.D.	O.D.	13 [#] Bar WGT.	Part No.
10	12-1/2	208	80100
10-1/4		192	82100
10-1/2		176	84100
10-3/4		159	86100
11		133	88100
11-1/4		129	90100
11-1/2		96	92100
6	12-3/4	432	48102
6-1/4		423	50102
6-1/2		413	52102
6-3/4		402	54102
7		391	56102
7-1/4		383	58102
7-1/2		370	60102
7-3/4		358	62102
8		345	64102
8-1/4		332	66102
8-1/2		318	68102
8-3/4		304	70102
9		291	72102
9-1/4		276	74102
9-1/2		261	76102
9-3/4		245	78102
10		228	80102
10-1/4		213	82102
10-1/2		197	84102
10-3/4		180	86102
11		162	88102
11-1/4		144	90102
11-1/2		125	92102
11-3/4		106	94102
6	13	454	48104
6-1/4		444	50104
6-1/2		434	52104
6-3/4		423	54104
7		413	56104
7-1/4		404	58104
7-1/2		393	60104
7-3/4		379	62104
8		366	64104
8-1/4		353	66104
8-1/2		339	68104
8-3/4		325	70104
9		311	72104
9-1/4		297	74104
9-1/2		282	76104
9-3/4		266	78104
10		250	80104
10-1/4		234	82104
10-1/2		218	84104
10-3/4		201	86104
11		183	88104
11-1/4		165	90104
11-1/2		146	92104
11-3/4		127	94104
12		100	96104
7-1/4	13-1/4		58106
7-1/2			60106

Centrifugal Cast Bronze

CDA 932, SAE 660, ASTM-B271



Cored Bar

I.D.	O.D.	13" Bar WGT.	Part No.
7-3/4	13-1/4	402	62106
8		389	64106
8-1/4		376	66106
8-1/2		362	68106
8-3/4		348	70106
9		335	72106
9-1/4		320	74106
9-1/2		305	76106
9-3/4		289	78106
10		272	80106
10-1/4		257	82106
10-1/2		241	84106
10-3/4		224	86106
11		206	88106
11-1/4		188	90106
11-1/2		169	92106
11-3/4		150	94106
12		132	96106
12-1/4		112	98106
7-1/4	13-1/2	448	58108
7-1/2		435	60108
7-3/4		423	62108
8		410	64108
8-1/4		397	66108
8-1/2		383	68108
8-3/4		369	70108
9		355	72108
9-1/4		341	74108
9-1/2		325	76108
9-3/4		310	78108
10		294	80108
10-1/4		278	82108
10-1/2		259	84108
10-3/4		245	86108
11		227	88108
11-1/4		209	90108
11-1/2		190	92108
11-3/4		171	94108
12		152	96108
12-1/4		133	98108
12-1/2		104	100108
8-1/4	13-3/4	420	66110
8-1/2		406	68110
8-3/4		392	70110
9		379	72110
9-1/4		364	74110
9-1/2		349	76110
9-3/4		333	78110
10		316	80110
10-1/4		301	82110
10-1/2		285	84110
10-3/4		268	86110
11		250	88110
11-1/4		232	90110
11-1/2		213	92110
11-3/4		194	94110
12		176	96110
12-1/4		156	98110
12-1/2		136	100110
12-3/4		115	102110

I.D.	O.D.	13" Bar WGT.	Part No.
8-1/4	14	444	66112
8-1/2		430	68112
8-3/4		416	70112
9		402	72112
9-1/4		388	74112
9-1/2		372	76112
9-3/4		357	78112
10		341	80112
10-1/4		325	82112
10-1/2		308	84112
10-3/4		292	86112
11		274	88112
11-1/4		256	90112
11-1/2		237	92112
11-3/4		218	94112
12		199	96112
12-1/4		180	98112
12-1/2		159	100112
12-3/4		139	102112
13		108	104112
10-1/4	14-1/4	348	82114
10-1/2		332	84114
10-3/4		315	86114
11		297	88114
11-1/4		279	90114
11-1/2		260	92114
11-3/4		241	94114
12		223	96114
12-1/4		203	98114
12-1/2		183	100114
12-3/4		162	102114
13		141	104114
13-1/4		121	106114
10-1/4	14-1/2	371	82116
10-1/2		354	84116
10-3/4		338	86116
11		320	88116
11-1/4		302	90116
11-1/2		283	92116
11-3/4		264	94116
12		245	96116
12-1/4		226	98116
12-1/2		206	100116
12-3/4		185	102116
13		164	104116
13-1/4		144	106116
13-1/2		123	108116
10-1/4	14-3/4	395	82118
10-1/2		379	84118
10-3/4		362	86118
11		344	88118
11-1/4		326	90118
11-1/2		307	92118
11-3/4		288	94118
12		270	96118
12-1/4		250	98118
12-1/2		230	100118
12-3/4		209	102118
13		188	104118

I.D.	O.D.	13" Bar WGT.	Part No.
13-1/4	14-3/4	168	106118
13-1/2		146	108118
13-3/4		124	110118
10-1/4	15	421	82120
10-1/2		407	84120
10-3/4		389	86120
11		371	88120
11-1/4		353	90120
11-1/2		334	92120
11-3/4		315	94120
12		296	96120
12-1/4		277	98120
12-1/2		256	100120
12-3/4		236	102120
13		216	104120
13-1/4		195	106120
13-1/2		173	108120
13-3/4		151	110120
14		115	112120
12	15-1/4	322	96122
12-1/4		302	98122
12-1/2		282	100122
12-3/4		261	102122
13		240	104122
13-1/4		220	106122
13-1/2		198	108122
13-3/4		176	110122
14		153	112122
14-1/4		131	114122
12	15-1/2	347	96124
12-1/4		326	98124
12-1/2		305	100124
12-3/4		285	102124
13		265	104124
13-1/4		244	106124
13-1/2		222	108124
13-3/4		200	110124
14		178	112124
14-1/4		155	114124
14-1/2		132	116124
12	15-3/4	373	96126
12-1/4		353	98126
12-1/2		333	100126
12-3/4		312	102126
13		291	104126
13-1/4		271	106126
13-1/2		249	108126
13-3/4		227	110126
14		204	112126
14-1/4		182	114126
14-1/2		159	116126
14-3/4		135	118126
12	16	399	96128
12-1/4		379	98128
12-1/2		358	100128
12-3/4		338	102128
13		317	104128
13-1/4		297	106128

ALUMINUM BRONZE



Continuous Cast Aluminum Bronze

National CDA954, ASTM B505



Please Note: This is a reference list of sizes readily available from stock – sizes not shown can be manufactured as required.

Typical Properties Aluminum Bronze CDA 954, ASTM-B505

Chemical Composition Elongation in 2 Inches

Aluminum	10-11.5%	16%
Iron	3-5%	16%
Copper	Balance	Reduction of Area
		None
Tensile Strength	100,000 PSI	
Yield Strength	45,000 PSI	
Elongation in 2 inches	16%	
Brinell Number at 500 KG Load	180	

Aluminum Bronze Tubes

Continuous Cast
Stock Sizes and approximate weights per inch.

Finish Allowances

Actual sizes provide approximate allowances for finish as follows:

Finish O.D. incl. up to	Stock I.D. & O.D.
0 – 1"	1/32"
1 – 2-1/4"	3/64"
2-1/4 – 3-1/4"	1/64"
3-1/4 – 5"	5/64"
5 – 9"	7/64"

Continuous Cast Aluminum Bronze

National CDA954, ASTM B505



Solid

I.D.	O.D.	Item Number	Approximate Lbs./In
SOLID	1/2	109192	.07
	3/4	109194	.14
1		109196	.24
	1-1/4	109198	.37
	1-1/2	109200	.52
	1-3/4	109202	.70
2		109204	.90
	2-1/4	109206	1.15
	2-1/2	109208	1.41
	2-3/4	109210	1.70
3		109212	2.01
	3-1/4	109213	2.41
	3-1/2	109214	2.78
	3-3/4	109215	3.18
4		109216	3.60
	4-1/4	109217	4.05
	4-1/2	109218	4.53
	4-3/4	109219	5.04

I.D.	O.D.	Item Number	Approximate Lbs./In
SOLID	5	109220	5.57
	5-1/2	109289	6.71
	6	109290	8.00
	6-1/2	109291	9.36
	7	109292	10.69
	8	109293	13.95
	9	109294	17.72
	10	-	22.25
	11	-	26.80
	12	-	31.78
	13	-	37.46
	14	-	43.31
	15	-	44.86

Continuous Cast Aluminum Bronze

National CDA954, ASTM B505



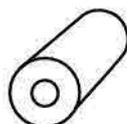
Cored Bar

I.D.	O.D.	Item Number	Approximate Lbs./In
3/4	1-1/4	109016	.27
	1-1/2	109018	.42
	1-3/4	109020	.60
	2	109022	.80
1	1-1/2	109035	.33
	1-3/4	109037	.51
	2	109039	.72
	2-1/4	109041	.97
	2-1/2	109043	1.23
	2-3/4	109044	1.54
	3	109045	1.83
	3-1/2	109047	2.52
1-1/4	1-3/4	109059	.40
	2	109061	.60
	2-1/8	109049	.72
	2-1/4	109063	.86
	2-1/2	109065	1.12
	2-3/4	109067	1.41
	3	109069	1.72
	3-1/4	109070	2.14
1-1/2	1-7/8	109240	.30
	2	109082	.47
	2-1/4	109084	1.72
	2-3/8	109095	.85
	2-1/2	109086	.98
	2-3/4	109088	1.27
	3	109089	1.58
	3-1/4	109090	2.01
	3-1/2	109091	2.38
	3-3/4	109092	2.74
	4	109093	3.30
	4-1/16	109094	4.19
1-3/4	2-1/8	109096	.54
	2-1/4	109102	.56
	2-1/2	109104	.82
	2-3/4	109106	1.11
	3	109108	1.42
	3-1/4	109109	1.85
	3-1/2	109110	2.22
	3-3/4	109111	2.62
2	4	109112	3.01
	2-3/8	109244	.52
	2-1/2	109121	.63
	2-3/4	109123	.92
	2-7/8	109245	1.08
	3	109125	1.23
	3-1/4	109126	1.66
	3-1/2	109127	2.03
	3-3/4	109128	2.43
	4	109129	2.85
	4-1/2	109130	3.78
	5	109131	4.82
	6	109243	7.15

I.D.	O.D.	Item Number	Approximate Lbs./In
2-1/4	2-5/8	109148	.58
	2-3/4	109139	.70
	3	109141	1.01
	3-1/4	109143	1.45
	3-1/2	109144	1.82
	3-3/4	109145	2.22
	4	109146	2.64
	4-1/4	109147	3.09
2-1/2	3	109154	.77
	3-1/4	109156	1.21
	3-1/2	109157	1.58
	3-3/4	109158	1.98
	4	109159	2.40
	4-1/2	109161	3.33
2-3/4	5	109163	4.36
	6	109249	6.67
	3-1/4	109251	.94
	3-1/2	109168	1.31
	3-3/4	109169	1.71
	4	109170	2.13
3	4-1/4	109171	2.58
	4-1/2	109172	3.06
	4-3/4	109173	3.51
	3-1/2	109255	1.02
	3-3/4	109175	1.42
	4	109176	1.84
3-1/4	4-1/4	109177	2.29
	4-1/2	109178	2.77
	5	109180	3.80
	5-1/2	109257	4.95
	6	109258	6.09
	7	109259	8.95
	3-3/4	109260	1.10
	4	109261	1.52
3-1/2	4-1/4	109181	1.97
	4-1/2	109182	2.45
	5	109184	3.48
	4	109262	1.18
	4-1/8	109189	1.34
	4-1/4	109264	1.63
	4-1/2	109185	2.10
	5	109187	3.14
4	5-1/2	109265	4.28
	6	109266	5.40
	4-1/2	109271	1.33
	4-3/4	109190	1.84
	5	109191	2.37
	5-1/2	109272	3.51
	6	109273	4.60
	6-1/2	109274	6.18
8	7	109295	7.36
	8	109296	10.80

Continuous Cast Aluminum Bronze

National CDA954, ASTM B505



Cored Bar

I.D.	O.D.	Item Number	Approximate Lbs./In
4-1/4	5	109277	1.92
4-1/2	5	109278	1.49
	5-1/4	109270	1.95
	5-1/2	109279	2.63
	6	109280	3.69
	6-1/2	109281	5.05
5	5-1/2	109284	1.64
	5-3/4	109283	2.24
	6	109285	2.68
	6-1/2	109286	4.04
	7	109287	5.44
	8	109282	8.95
5-1/4	7-1/4	109289	4.44
5-1/2	6-1/2	109288	2.92
6	7	109292	3.36

I.D.	O.D.	Item Number	Approximate Lbs./In
6-1/2	7-1/2	109296	3.60
6-3/4	7-3/4	109297	3.73
7	8	109298	3.78
	9	109299	7.85
	10	109300	11.70
7-1/2	8-1/2	109301	4.84
8	9	109302	4.47
	10	109303	8.43
9	10	109304	4.82
	11	109305	9.37
10	12	-	12.36
	13	-	17.95
11	15	-	26.25
12	15	-	21.45

Continuous Cast Aluminum Bronze



Rectangle

National CDA954, ASTM B505

TH	x	W	Approximate Lbs./In
1/4	x	1	.104
		1-1/4	.125
		1-1/2	.145
		2	.194
		2-1/2	.243
		2-3/4	.256
		3	.284
		3-1/2	.340
		4	.381
		5	.465
		6	.604
		12	1.145
3/8	x	1	.139
		1-1/2	.201
		2	.263
		2-1/2	.326
		3	.388
		3-1/2	.458
		4	.513
		5	.638
		6	.805
		8	1.055
		12	1.541
		1/2	x
1	.173		
1-1/4	.215		
1-1/2	.256		
1-3/4	.298		
2	.333		
2-1/2	.416		
3	.493		
3-1/2	.576		
4	.652		
5	.812		

TH	x	W	Approximate Lbs./In
1/2	x	6	1.007
		8	1.333
		10	1.652
		12	1.965
5/8	x	1	.208
		1-1/2	.305
		2	.402
		2-1/2	.500
		3	.597
		4	.791
		5	.986
		6	1.215
3/4	x	3/4	.194
		1	.250
		1-1/2	.361
		2	.472
		2-1/2	.590
		3	.701
		3-1/2	.812
		4	.930
		5	1.159
		6	1.423
		8	1.861
		12	2.715
1	x	1	.319
		1-1/4	.395
		1-1/2	.465
		1-3/4	.541
		2	.618
		2-1/2	.763
3	.909		

Continuous Cast Aluminum Bronze

National CDA954, ASTM B505



Rectangle

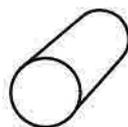
TH	X	W	Approximate Lbs./In
1	x	3-1/2	1.055
		4	1.208
		5	1.500
		6	1.826
		7	2.097
		8	2.402
		12	3.541
		15	4.993
1-1/4	x	1-1/4	.479
		1-1/2	.576
		1-3/4	.666
		2	.756
		2-1/2	.937
		3	1.118
		3-1/2	1.298
		4	1.486
		5	1.833
		10	3.687
1-1/2	x	1-1/2	.680
		1-3/4	.784
		2	.902
		2-1/2	1.118
		3	1.326
		3-1/2	1.548
		4	1.763
		5	2.173
		6	2.687
		12	5.201
15	7.007		
1-3/4	x	1-3/4	.923
		2	1.041
		2-1/2	1.291
		3	1.527

TH	X	W	Approximate Lbs./In
1-3/4	x	4	2.041
		5	2.541
		6	3.076
		10	5.076
2	x	2	1.187
		2-1/2	1.465
		3	1.750
		3-1/2	2.027
		4	2.326
		6	3.506
		10	5.743
		12	6.965
15	9.041		
2-1/2	x	2-1/2	1.819
		3	2.166
		4	2.875
		5	3.576
		6	4.298
		12	8.562
15	11.229		
3	x	3	2.576
		4	4.430
		6	5.159
		12	10.152
		15	13.305
3-1/2	x	12	11.812
		15	15.361
4	x	4	4.527
		15	17.465
6	x	6	10.125

Continuous Cast Aluminum Bronze

National CDA959, ASTM B505

Stock sizes and approximate weight per inch.



Solid

Solid Round	Weight Per Inch
1	.236
1-1/4	.354
1-1/2	.509
1-3/4	.701
2	.875
2-1/4	1.104
2-1/2	1.347
3	1.938
3-1/2	2.695
4	3.430
4-1/2	4.549
5	5.368
8	13.840
13	36.209
14	41.857
15	47.937

Metric Continous Cast Aluminum Bronze

C959 ASTM B505



Metric Rectangle

Thickness (MM)	Width (MM)	Weight Per Inch
20	50	.486
20	80	.764
20	100	.944
20	125	1.174
20	160	1.507

Continuous Cast Wearplate Aluminum Bronze



Rectangle

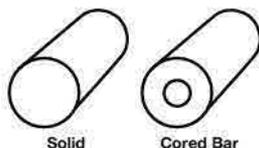
National CDA959, ASTM B505

TH	X	W	Weight Per Inch
1/4	x	1	.160
		2	.284
		3	.312
		4	.542
		5	.667
		6	.799
		7	.924
		8	1.049
		9	1.180
		10	1.306
		12	1.563
		3/8	x
2	.361		
3	.424		
4	.681		
5	.834		
6	.993		
7	1.528		
8	1.312		
9	1.473		
10	1.632		
12	1.959		
1/2	x		
		2	.431
		3	.521
		4	.813
		5	1.007
		6	1.195
		7	1.389
		8	1.577
		9	1.771
		10	1.959
		12	2.320

TH	X	W	Weight Per Inch
5/8	x	1-1/2	.327
3/4	x	1	.320
		2	.577
		3	.730
		4	1.084
		5	1.341
		6	1.598
		7	1.848
		8	2.105
		9	2.362
		10	2.612
		12	3.119
		1	x
2	.716		
3	.785		
4	.931		
5	1.230		
6	1.514		
7	1.813		
8	2.313		
9	2.632		
10	3.264		
12	3.952		
1-1/2	x		
1-3/4	x	2-1/2	1.257
2	x	5	2.771
2-1/2	x	4	2.869
		7	4.757

Manganese Bronze Tube & Round Bar

C86300, ASTM B505



Stock sizes and approximate weight per inch.

Solid Round	Weight Per Inch
1	.257
1-1/2	.542
2	.944
2-1/2	1.438
3	2.070
3-1/2	2.861
4	3.688
4-1/2	4.792
5	5.806
6	8.570

I.D.	O.D.	Weight Per Inch
1	1-1/2	.368
	2	.764
	2-1/2	1.292
	3	1.903
1-1/2	4	3.556
	2	.514
2	2-1/4	.368
	2-1/2	.667
	2-3/4	.972
	3	1.299
	3-1/2	2.118
	4	2.965
2-1/2	5	5.111
	6	7.771
3	3	.833
	3-1/2	1.667
3	3-1/2	1.076
	4	1.951
	5	4.104
3-1/2	4-1/4	1.875
	4-3/4	2.868
	5-1/2	4.514
4	4-1/2	1.569
	5	2.639
	6	5.326
5	6	3.528
	7	6.326

COPPER



Roofing Copper Sheet

Hot Rolled & Cold Rolled

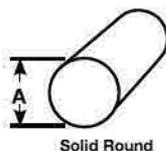
ASTM B152

Thickness		Size Inches	Lbs. Per Sheet
Ounces	Inches		
12	(.016)	36 x 96	18.0
16	(.021)*	36 x 96	24.0
16	(.021)*	36 x 120	30.0
20	(.027)	36 x 96	30.0
20	(.027)	36 x 120	38.0
24	(.032)*	36 x 96	36.0
24	(.032)	36x120	45.0
32	(.043)*	36 x 96	48.0
32	(.043)	36 x 120	60.0

* Available in soft temper.

Round Copper Rod

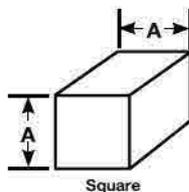
12 Foot Mill Lengths UNS-C11000



Item Number	Dim "A" Inches	Lbs. Per Foot	Tolerance
			Dim. "A" (+ & -)
RCR 125	1/8	.0473	.0015
RCR 187	3/16	.1068	.0015
RCR 250	1/4	.1896	.0015
RCR 312	5/16	.2963	.0015
RCR 375	3/8	.4265	.0015
RCR 437	7/16	.5806	.0015
RCR 500	1/2	.7583	.0015
RCR 562	9/16	.9597	.002
RCR 625	5/8	1.1848	.002
RCR 750	3/4	1.7062	.002
RCR 875	7/8	2.3223	.002
RCR 1000	1	3.0332	.002
RCR 1125	1-1/8	3.8389	.0025
RCR 1250	1-1/4	4.7395	.0025
RCR 1375	1-3/8	5.7347	.0025
RCR 1500	1-1/2	6.8248	.0025
RCR 1625	1-5/8	8.0096	.0025
RCR 1750	1-3/4	9.2893	.0025
RCR 2000	2	12.1330	.0025
RCR 2250	2-1/4	15.3558	0.15%
RCR 2500	2-1/2	18.9578	0.15%
RCR 2750	2-3/4	22.9389	0.15%
RCR 3000	3	27.2992	0.15%
RCR 3250	3-1/4	32.0386	0.15%
RCR 3500	3-1/2	37.1572	0.15%
RCR 4000	4	48.5318	0.15%
RCR 4250	4-1/4	54.7879	0.15%
RCR 4500	4-1/2	61.4231	0.15%
RCR 5000	5	75.8310	0.15%
RCR 5500	5-1/2	91.7555	0.15%
RCR 6000	6	109.1966	0.15%

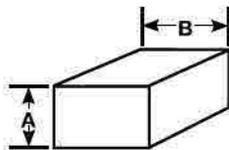
Square Copper Bar

12 Foot Mill Lengths UNS-C11000



Item Number	Dim "A" Inches	Lbs. Per Foot	Tolerance
			Dim. "A" (+ & -)
SCB 250	1/4	.2415	.003
SCB 375	3/8	.5433	.003
SCB 500	1/2	.9660	.003
SCB 625	5/8	1.5093	.004
SCB 750	3/4	2.1735	.004
SCB 1000	1	3.8640	.004
SCB 1250	1-1/4	6.0375	.0045
SCB 1500	1-1/2	8.6940	.0045
SCB 2000	2	15.4560	.0045
SCB 2500	2-1/2	24.1500	0.30%
SCB 3000	3	34.7760	0.30%

Rectangular Copper Bar



12 Foot Mill Lengths UNS-C11000

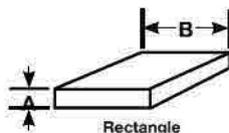
Rectangle

Item Number	Dim. "A" Inches	Dim. "B" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
RCB 062 500	1/16	1/2	.1208	.0015
RCB 062 750	1/16	3/4	.1811	.0015
RCB 062 1000	1/16	1	.2415	.0015
RCB 093 750	3/32	3/4	.2715	.002
RCB 093 1000	3/32	1	.3621	.002
RCB 125 375	1/8	3/8	.1811	.002
RCB 125 500	1/8	1/2	.2415	.002
RCB 125 625	1/8	5/8	.3019	.002
RCB 125 750	1/8	3/4	.3623	.002
RCB 125 875	1/8	7/8	.4226	.002
RCB 125 1000	1/8	1	.4830	.002
RCB 125 1250	1/8	1-1/4	.6038	.002
RCB 125 1500	1/8	1-1/2	.7245	.0025
RCB 125 1750	1/8	1-3/4	.8453	.0025
RCB 125 2000	1/8	2	.9660	.0025
RCB 125 2500	1/8	2-1/2	1.2075	.003
RCB 125 3000	1/8	3	1.4490	.003
RCB 125 4000	1/8	4	1.9320	.003
RCB 125 6000	1/8	6	2.8980	.0035
RCB 187 500	3/16	1/2	.3623	.0025
RCB 187 625	3/16	5/8	.4528	.0025
RCB 187 750	3/16	3/4	.5434	.0025
RCB 187 1000	3/16	1	.7245	.0025
RCB 187 1250	3/16	1-1/4	.9056	.0025
RCB 187 1500	3/16	1-1/2	1.0868	.003
RCB 187 1750	3/16	1-3/4	1.2679	.003
RCB 187 2000	3/16	2	1.4490	.003
RCB 187 2500	3/16	2-1/2	1.8113	.0035
RCB 187 3000	3/16	3	2.1735	.0035
RCB 187 4000	3/16	4	2.8980	.0035
RCB 250 500	1/4	1/2	.4830	.003
RCB 250 625	1/4	5/8	.6038	.003
RCB 250 750	1/4	3/4	.7245	.003
RCB 250 1000	1/4	1	.9660	.003
RCB 250 1250	1/4	1-1/4	1.2075	.003
RCB 250 1500	1/4	1-1/2	1.4490	.0035
RCB 250 1750	1/4	1-3/4	1.6905	.0035
RCB 250 2000	1/4	2	1.9320	.004
RCB 250 2500	1/4	2-1/2	2.4150	.004
RCB 250 3000	1/4	3	2.8980	.004
RCB 250 3500	1/4	3-1/2	3.3810	.004
RCB 250 4000	1/4	4	3.8640	.004
RCB 250 5000	1/4	5	4.8300	.0045
RCB 250 6000	1/4	6	5.7960	.0045
RCB 250 8000	1/4	8	7.7280	.0045
RCB 312 1000	5/16	1	1.2075	.003
RCB 312 1250	5/16	1-1/4	1.5094	.003
RCB 312 1375	5/16	1-3/8	1.6603	.0035
RCB 312 2000	5/16	2	2.4150	.0035
RCB 375 500	3/8	1/2	.7245	.003
RCB 375 625	3/8	5/8	.9056	.003
RCB 375 750	3/8	3/4	1.0868	.003
RCB 375 1000	3/8	1	1.4490	.003
RCB 375 1250	3/8	1-1/4	1.8113	.003
RCB 375 1500	3/8	1-1/2	2.1735	.0035

Item Number	Dim. "A" Inches	Dim. "B" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
RCB 375 2000	3/8	2	2.8960	.0035
RCB 375 2500	3/8	2-1/2	3.6225	.004
RCB 375 3000	3/8	3	4.3470	.004
RCB 375 3500	3/8	3-1/2	5.0715	.004
RCB 375 4000	3/8	4	5.7960	.004
RCB 375 5000	3/8	5	7.2450	.0045
RCB 375 6000	3/8	6	8.6940	.0045
RCB 500 750	1/2	3/4	1.4490	.003
RCB 500 1000	1/2	1	1.9320	.003
RCB 500 1250	1/2	1-1/4	2.4150	.003
RCB 500 1500	1/2	1-1/2	2.8980	.0035
RCB 500 1750	1/2	1-3/4	3.3810	.0035
RCB 500 2000	1/2	2	3.8640	.0035
RCB 500 2500	1/2	2-1/2	4.8300	.004
RCB 500 3000	1/2	3	5.7960	.004
RCB 500 3500	1/2	3-1/2	6.7620	.004
RCB 500 4000	1/2	4	7.7280	.004
RCB 500 5000	1/2	5	9.6600	.0045
RCB 500 6000	1/2	6	11.5920	.0045
RCB 500 8000	1/2	8	15.4560	.0045
RCB 625 1000	5/8	1	2.4150	.004
RCB 625 1250	5/8	1-1/4	3.0188	.004
RCB 625 1500	5/8	1-1/2	3.6225	.004
RCB 625 2000	5/8	2	4.8300	.004
RCB 625 2500	5/8	2-1/2	6.0375	.0045
RCB 625 3000	5/8	3	7.2450	.0045
RCB 625 4000	5/8	4	9.6600	.0045
RCB 750 1000	3/4	1	2.8980	.004
RCB 750 1250	3/4	1-1/4	3.6225	.004
RCB 750 1500	3/4	1-1/2	4.3470	.004
RCB 750 2000	3/4	2	5.7960	.004
RCB 750 2500	3/4	2-1/2	7.2450	.0045
RCB 750 3000	3/4	3	8.6940	.0045
RCB 750 3500	3/4	3-1/2	10.1430	.0045
RCB 750 4000	3/4	4	11.5920	.0045
RCB 750 5000	3/4	5	14.4900	.005
RCB 750 6000	3/4	6	17.3880	.005
RCB 750 7750	3/4	7-3/4	22.4595	.005
RCB 750 8000	3/4	8	23.1840	.005
RCB 875 1750	7/8	1-3/4	5.9168	.004
RCB 1000 1250	1	1-1/4	4.8300	.004
RCB 1000 1500	1	1-1/2	5.7960	.004
RCB 1000 1750	1	1-3/4	6.7620	.004
RCB 1000 2000	1	2	7.7280	.004
RCB 1000 2500	1	2-1/2	9.6600	.0045
RCB 1000 3000	1	3	11.5920	.0045
RCB 1000 3500	1	3-1/2	13.5240	.0045
RCB 1000 4000	1	4	15.4560	.0045
RCB 1000 5000	1	5	19.3200	.005
RCB 1000 6000	1	6	23.1840	.005
RCB 1000 7000	1	7	27.0480	.005
RCB 1000 8000	1	8	30.9120	.005
RCB 1062 1125	1-1/16	1-1/8	4.6187	.0045
RCB 1250 1500	1-1/4	1-1/2	7.2450	.0045
RCB 1250 2000	1-1/4	2	9.6600	.0045
RCB 1250 2500	1-1/4	2-1/2	12.0750	.005

Rectangular Copper Bar

12 Foot Mill Lengths UNS-C11000 (Continued)

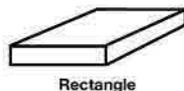


Item Number	Dim. "A" Inches	Dim. "B" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
RCB 1250 3000	1-1/4	3	14.4900	.005
RCB 1250 3500	1-1/4	3-1/2	16.9050	.005
RCB 1250 4000	1-1/4	4	19.3200	.005
RCB 1250 5000	1-1/4	5	24.1500	.006
RCB 1250 6000	1-1/4	6	29.0000	.006
RCB 1250 7000	1-1/4	7	33.8100	.006
RCB 1500 2000	1-1/2	2	11.5920	.0045
RCB 1500 2500	1-1/2	2-1/2	14.4900	.005
RCB 1500 3000	1-1/2	3	17.3880	.005
RCB 1500 3500	1-1/2	3-1/2	20.2860	.005
RCB 1500 4000	1-1/2	4	23.1840	.005
RCB 1500 5000	1-1/2	5	28.9800	.006
RCB 1500 6000	1-1/2	6	34.7760	.006
RCB 1750 2000	1-3/4	2	13.5240	.0045
RCB 2000 2500	2	2-1/2	19.3200	0.30%

Item Number	Dim. "A" Inches	Dim. "B" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
RCB2000 3000	2	3	23.1840	0.30%
RCB2000 4000	2	4	30.9120	0.30%
RCB2000 5000	2	5	38.6400	0.30%
RCB2000 6000	2	6	46.3680	0.30%
RCB2500 3000	2-1/2	3	28.9800	0.30%
RCB2500 3500	2-1/2	3-1/2	33.8100	0.30%
RCB2500 4000	2-1/2	4	38.6400	0.30%
RCB2500 5000	2-1/2	5	48.3000	0.30%
RCB3000 4000	3	4	46.3680	0.30%

Plate Rolled Copper

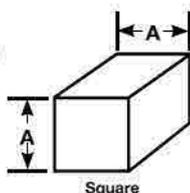
ASTM B152, C11000/101/102



Thickness Inches	Size Inches	Lbs. Per Square Foot	Lbs. Per Plate
1/4	36 x 96	11.6	279
3/8	36 x 96	17.4	418
1/2	36 x 96	23.3	558
3/4	36 x 96	34.9	837
1	36 x 96	46.5	1116
1-1/4	36 x 96	58.1	1395
1-1/2	36 x 96	69.8	1674
2	36 x 96	93.0	2232
2-1/2	36 x 96	116.3	2791
3	24 x 96	139.5	2233
3	36 x 96	139.5	3348
3-1/2	36 x 96	162.7	3907
4	36 x 96	186.0	4465

Square RWMA Class 2 Bar

Random Mill Lengths –
Heat Treated UNS-C18200

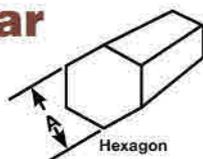


Item Number	Dim "A" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
CL2S 500	1/2	.9630	.005
CL2S 750	3/4	2.1668	.006
CL2S 1000	1	3.8520	.006

Item Number	Dim "A" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
CL2S 1250	1-1/4	6.0187	.006
CL2S 1500	1-1/2	8.6670	.007
CL2S 2000	2	15.4080	.007

Hexagon RWMA Class 2 Bar

Random Mill Lengths –
Heat Treated UNS-C18200

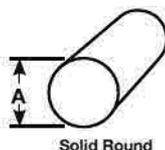


Item Number	Dim "A" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
CL2H 1000	1	3.3384	.004

Item Number	Dim "A" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
CL2H 1250	1-1/4	5.2163	.005

Round RWMA Class 2 Rod

Random Mill Lengths –
Heat Treated UNS-C18200

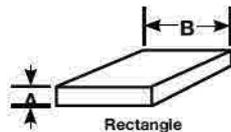


Item Number	Dim "A" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
CL2R 312	5/16	.2953	.0015
CL2R 375	3/8	.4252	.0015
CL2R 500	1/2	.7560	.0015
CL2R 562	9/16	.9568	.002
CL2R 625	5/8	1.1812	.002
CL2R 750	3/4	1.7009	.002
CL2R 875	7/8	2.3151	.002
CL2R 1000	1	3.0238	.002
CL2R 1125	1-1/8	3.8270	.0025
CL2R 1250	1-1/4	4.7247	.0025
CL2R 1375	1-3/8	5.7169	.0025

Item Number	Dim "A" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
CL2R 1500	1-1/2	6.8036	.0025
CL2R 1750	1-3/4	9.2604	.0025
CL2R 2000	2	12.0953	.0025
CL2R 2250	2-1/4	15.3081	.003
CL2R 2500	2-1/2	18.8989	.004
CL2R 2750	2-3/4	22.8676	.005
CL2R 3000	3	27.2144	.005
CL2R 3125	3-1/8	29.5295	.005
CL2R 3500	3-1/2	37.0418	.005
CL2R 4125	4-1/8	51.4522	.006

Rectangular RWMA Class 2 Bar

Random Mill Lengths – Heat Treated UNS-C18200

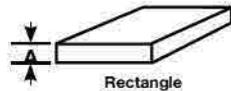


Item Number	Dim. "A"	Dim. "B"	Lbs. Per Foot	Tolerance (+ & -)	
	Inches	Inches		Dim. "A"	Dim. "B"
CL2B 250 750	1/4	3/4	.6934	.003	.005
CL2B 250 1000	1/4	1	.969	.003	.005
CL2B 250 1500	1/4	1-1/2	1.45	.0035	.008
CL2B 250 2000	1/4	2	1.94	.0035	.008
CL2B 375 750	3/8	3/4	1.08	.003	.005
CL2B 375 1000	3/8	1	1.45	.003	.005
CL2B 375 2000	3/8	2	2.89	.0035	.008
CL2B 500 750	1/2	3/4	1.45	.003	.005
CL2B 500 1000	1/2	1	1.94	.003	.005
CL2B 500 1500	1/2	1-1/2	2.90	.0035	.008
CL2B 500 2000	1/2	2	3.88	.0035	.008
CL2B 500 3000	1/2	3	5.78	.004	.012
CL2B 625 1000	5/8	1	2.42	.004	.005

Item Number	Dim. "A"	Dim. "B"	Lbs. Per Foot	Tolerance (+ & -)	
	Inches	Inches		Dim. "A"	Dim. "B"
CL2B 750 1000	3/4	1	2.91	.004	.005
CL2B 750 1500	3/4	1-1/2	4.36	.004	.008
CL2B 750 2000	3/4	2	5.82	.004	.008
CL2B 750 2500	3/4	2-1/2	7.22	.004	.008
CL2B 750 3000	3/4	3	8.67	.004	.008
CL2B 1000 1250	1	1-1/4	4.85	.004	.005
CL2B 1000 1500	1	1-1/2	5.82	.004	.008
CL2B 1000 2000	1	2	7.75	.004	.008
CL2B 1000 3000	1	3	11.6	.0045	.012
CL2B 1250 1500	1-1/4	1-1/2	7.27	.0045	.008
CL2B 1500 2000	1-1/2	2	11.6	.0045	.008
CL2B 1750 2000	1-3/4	2	13.49	.005	.012

RWMA Class 2 Plate

Random Length/Width – Heat Treated UNS-C18200

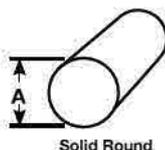


Item Number	Dim "A" Inches	Lbs. Square Foot	Tolerance
			Dim. "A" (+ & -)
CL2P 250	1/4	11.5560	.0045
CL2P 375	3/8	17.3340	.015
CL2P 500	1/2	23.1120	.015
CL2P 625	5/8	28.8900	.019
CL2P 750	3/4	34.6680	.019
CL2P 1000	1	46.2240	.024

Item Number	Dim "A" Inches	Lbs. Square Foot	Tolerance
			Dim. "A" (+ & -)
CL2P 1250	1-1/4	57.7800	.029
CL2P 1500	1-1/2	69.3360	.029
CL2P 2000	2	92.4480	.036
CL2P 2500	2-1/2	115.5600	.036
CL2P 3000	3	138.6720	.036
CL2P 4000	4	184.1680	.036

Round RWMA Class 3 Rod

Random Mill Lengths – Heat Treated UNS-C17510

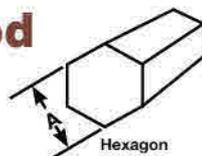


Item Number	Dim "A" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
CL3R 375	3/8	.4186	.0015
CL3R 500	1/2	.7442	.0015
CL3R 625	5/8	1.1628	.002
CL3R 750	3/4	1.6744	.002
CL3R 875	7/8	2.2791	.002
CL3R 1000	1	2.9767	.002
CL3R 1125	1-1/8	3.7674	.0025
CL3R 1250	1-1/4	4.6511	.0025
CL3R 1375	1-3/8	5.6279	.0025
CL3R 1500	1-1/2	6.6976	.0025

Item Number	Dim "A" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
CL3R 1750	1-3/4	9.1162	.0025
CL3R 2000	2	11.9069	.0025
CL3R 2500	2-1/2	18.6045	.004
CL3R 2750	2-3/4	22.5114	.004
CL3R 3000	3	26.7905	.005
CL3R 3125	3-1/8	29.0695	.005
CL3R 3500	3-1/2	36.4648	.005
CL3R 4000	4	47.6275	.006
CL3R 4500	4-1/2	60.2786	.006

Hexagon RWMA Class 3 Rod

Random Mill Lengths – Heat Treated UNS-C17510

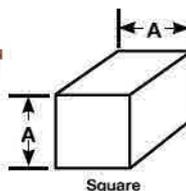


Item Number	Dim "A" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
CL3H 562	9/16	1.0398	.004

Item Number	Dim "A" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
CL3H 1250	1-1/4	5.1350	.005

Square RWMA Class 3 Bar

Random Mill Lengths – Heat Treated UNS-C17510

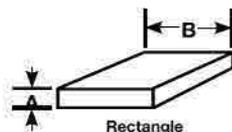


Item Number	Dim "A" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
CL3S 750	3/4	2.1330	.006
CL3S 1000	1	3.7920	.006
CL3S 1250	1-1/4	5.9250	.006

Item Number	Dim "A" Inches	Lbs. Per Foot	Tolerance Dim. "A" (+ & -)
CL3S 1500	1-1/2	8.5320	.007
CL3S 2000	2	15.1680	.007

Rectangular RWMA Class 3 Bar

Random Mill Lengths – Heat Treated UNS-C17510

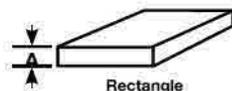


Item Number	Dim. "A"	Dim. "B"	Lbs. Per Foot	Tolerance (+ & -)	
	Inches	Inches		Dim. "A"	Dim. "B"
CL38 250 1000	1/4	1	.9480	.003	.005
CL38 250 2000	1/4	2	1.8960	.0035	.008
CL38 375 1250	3/8	1-1/4	1.7775	.003	.005
CL38 500 750	1/2	3/4	1.4220	.003	.005
CL38 500 1000	1/2	1	1.8960	.003	.005
CL38 500 1500	1/2	1-1/2	2.8440	.0035	.008
CL38 500 2000	1/2	2	3.7920	.0035	.008
CL38 750 1000	3/4	1	2.8440	.004	.005

Item Number	Dim. "A"	Dim. "B"	Lbs. Per Foot	Tolerance (+ & -)	
	Inches	Inches		Dim. "A"	Dim. "B"
CL38 750 1500	3/4	1-1/2	4.2660	.004	.008
CL38 750 2000	3/4	2	5.6880	.004	.008
CL38 1000 1250	1	1-1/4	4.7400	.004	.005
CL38 1000 1500	1	1-1/2	5.6880	.004	.008
CL38 1000 2000	1	2	7.5840	.004	.008
CL38 1000 3000	1	3	11.3760	.0045	.012
CL38 1250 1500	1-1/4	1-1/2	7.1100	.0045	.008

RWMA Class 3 Plate

Random Length/Width – Heat Treated UNS-C17510



Item Number	Dim "A"	Lbs. Per Foot	Tolerance
	Inches		Dim. "A"
(+ & -)			
CL3P 250	1/4	11.3760	.0045
CL3P 375	3/8	17.0640	.015
CL3P 500	1/2	22.7520	.015
CL3P 625	5/8	28.4400	.019
CL3P 750	3/4	34.1280	.019
CL3P 1000	1	45.5040	.024
CL3P 1250	1-1/4	56.8800	.029

Item Number	Dim "A"	Lbs. Per Foot	Tolerance
			Dim. "A"
(+ & -)			
CL3P 1500	1-1/2	68.2560	.029
CL3P 1750	1-3/4	79.6320	.029
CL3P 2000	2	91.0080	.036
CL3P 2500	2-1/2	113.7600	.036
CL3P 3000	3	136.5120	.036
CL3P 4000	4	182.0160	.036

OIL FILLED BEARINGS



Oil Impregnated Powder Metal Bronze Bearings



Oil Impregnated Powder Metal



TOLERANCES Based on ASTM Specifications

SLEEVE AND FLANGE BEARINGS

I.D. or O.D. Size:

Up to 1-1/2"	+0.000	-.001
1-1/2" to 2-1/2"	+0.000	-.0015
2-1/2" to 3"	+0.000	-.002
3" to 4"	+0.000	-.003
4" to 5"	+0.000	-.004
5" to 6"	+0.000	-.005

Length:

Up to 1-1/2"	±0.005
1-1/2" to 3"	±0.0075
3" to 5"	±0.010

Flange Diameter:

Up to 1-1/2"	±0.005
1-1/2" to 3"	±0.010
3" to 6"	±0.025

Flange Thickness:

Based on Flange O.D.	
Up to 1-1/2"	±0.005
1-1/2" to 3"	±0.010
3" to 6"	±0.015

Concentricity:

Up to 1-1/2"	.003
1-1/2" to 2"	.004
2" to 4"	.005
4" to 5"	.006
5" to 6"	.007

THRUST BEARINGS

Inside Diameter:

Up to 1-1/4"	±.005
1-1/4" to 2-1/2"	±.010
2-1/2" to 4"	±.015
4" to 6"	±.020

Outside Diameter:

Up to 1-1/2"	±0.010
1-1/2" to 3"	±0.015
3" to 4-1/2"	±0.020
4-1/2" to 6"	±0.025

Thickness: ±.0025

Parallelism of Faces:

Based on O.D.

Up to 1-1/2"	.002
1-1/2" to 3-1/2"	.003
3-1/2" to 6"	.004

MATERIAL SPECIFICATIONS

Composition %	Density (gm/cc)	Porosity (% by Vol.)	K Strength Constant	Tensile Strength	Elongation (in 1"%)	Yield Strength PSI	Comparable Designations
Copper 87.5-90.5	6.4-6.8	19 min.	26500	14000	1	11000	ASTM B-438-70 GR1 Type 11
Iron 1.0 max. Tin 9.5-10.5 Carbon 1.75 Other Elements 0.5							MPIF CT-1000-K26 SAE 841 Type I. Comp. A

SUPER SINTERED IRON MATERIAL SPECIFICATIONS

Copper 18.0-22.0	5.8-6.2	19 min.	40000	22000	1	22000	ASTM B-439-70 GR4 SAE 863, Type 3 Mil-B-5687C Type II. Comp. B
Iron Balance Other Elements 2.0							

†Thickness ±.0035"

‡Thickness ±.005"

*This part will no longer be available as a standard part when current stocks are depleted.

Flange Fillets

A fillet at the body O.D. of a flange bearing facilitates manufacturing and strengthens the part.

Standard Flange Fillets	
Bore Diameter	Fillet Radius
Up to 1.000"	1/32"
1.000" to 2.000"	3/64"
2.000" to 2.500"	1/16"
2.500" to 4.000"	3/32"
4.000" to 6.000"	1/8"

Press Fits (Interference Fits)

Plane cylindrical journal bearings are commonly installed by press fitting the bearing into a housing with an insertion arbor. For housings rigid enough to withstand the press fit without appreciable distortion and for bearings with thickness approximately one eighth of the bearing outside diameter the press fits shown in the Recommended Press Fits Table are suggested.

Recommended Press Fits (Inches)

Outside Diameter	Press Fit	
	Minimum	Maximum
Up to 0.760	0.001	0.003
0.761 to 1.510	0.0015	0.004
1.511 to 2.510	0.002	0.005
2.411 to 3.010	0.002	0.006
Over 3.010	0.002	0.007

Running Clearance

Proper running clearance for bearings depends to a great extent on the particular application. Only minimum recommended clearances for oil impregnated bearings used with ground steel shafting are listed in Running Clearance Table.

Running Clearance (Inches)

Shaft Size	Clearance, Min.
Up to 0.760	0.0005
0.761 to 1.510	0.001
1.511 to 2.510	0.0015
Over 2.510	0.002

Storage

Oil-impregnated units should be stored in suitable containers using plastic bags, waxpaper, metal, glass, etc. Wood, ordinary paper and cardboard are not suitable since they absorb oil from the bearing. Properly stored and protected against dust, oil-impregnated bearings retain their oil supply.

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
1/8 x 3/16 NOMINAL				
.125	.190	5/32	101001	AA-101-8
		1/4	101002	AA-101-2
		3/8	101003	AA-101
		1/2	101004	AA-101-1
.1265	.1895	1/8	101005	AA-110-1
		1/4	101006	AA-110-2
		5/16	101007	AA-110-4
.127	.1905	1/4	201001	P-12-2
		1/2	201002	P-12-4
1/8 x 7/32 NOMINAL				
.127	.222	1/4	101008	AA-223
		3/8	101009	AA-223-1
1/8 x 1/4 NOMINAL				
.127	.252	1/8	301001	B-24-1
		1/4	301002	B-24-2
		3/8	301003	B-24-3
		1/2	301004	B-24-4
.127	.253	1/8	201003	P-13-1
		1/4	201004	P-13-2
		3/8	201005	P-13-3
		1/2	201006	P-13-4
.128	.253	1/4	101010	AA-224
		3/8	101011	AA-224-1
1/8 x 5/16 NOMINAL				
.127	.315	1/8	301005	B-25-1
		1/4	301006	B-25-2
		3/8	301007	B-25-3
		1/2	301008	B-25-4
		5/8	301009	B-25-5
.127	.3155	1/8	201007	P-14-1
		1/4	201008	P-14-2
		3/8	201009	P-14-3
		1/2	201010	P-14-4
1/8 x 3/8 NOMINAL				
.127	.377	1/4	101012	AA-337-2
		1/2	101013	AA-337-3
5/32 x 7/32 NOMINAL				
.156	.220	1/4	101014	AA-211
		3/8	101015	AA-211-1
5/32 x 1/4 NOMINAL				
.1565	.2525	3/8	101016	AA-238
.159	.253	1/4	101017	AA-204-1
		5/16	101018	AA-204

I.D.	O.D.	Length	Item Number	Reference Number
3/16 x 1/4 NOMINAL				
.1875	.252	1/4	101019	AA-225-2
		5/16	101020	AA-225-1
		3/8	101021	AA-225-6
		1/2	101022	AA-225-4
		5/8	101023	AA-225-3
		1	101024	AA-225-5
.1885	.252	1/4	101024	AA-226-1
		3/8	101025	AA-226-2
		7/16	101026	AA-226
		1/2	101027	AA-226-3
		5/8	101028	AA-226-4
.189	.252	1/4	301010	B-34-2
		3/8	301011	B-34-3
		1/2	301012	B-34-4
		5/8	301013	B-34-5
		3/4	301014	B-34-6
.1895	.253	1/4	201011	P-18-2
		3/8	201012	P-18-3
		1/2	201013	P-18-4
		5/8	201014	P-18-5
		3/4	201015	P-18-6
3/16 x 5/16 NOMINAL				
.1885	.3145	3/16	101029	AA-309-9
		1/4	101030	AA-309
		5/16	101031	AA-309-3
		3/8	101032	AA-309-4
		7/16	101033	AA-309-8
		1/2	101034	AA-309-14
		5/8	101035	AA-309-7
		3/4	101036	AA-309-5
		1	101037	AA-309-6
.189	.314	1/4	301015	B-35-2
		3/8	301016	B-35-3
		1/2	301017	B-35-4
		5/8	301018	B-35-5
		3/4	301019	B-35-6
.1895	.3145	3/16	101037	AA-331
		1/4	101038	AA-331-2
		3/8	101039	AA-331-3
.1895	.3155	1/4	201016	P-19-2
		3/8	201017	P-19-3
		1/2	201018	P-19-4
		5/8	201019	P-19-5
		3/4	201020	P-19-6
		1	201021	P-19-8
3/16 x 3/8 NOMINAL				
.1885	.3775	1/4	101040	AA-346-1
		3/8	101041	AA-346-2
		1/2	101042	AA-346

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
3/16 x 3/8 NOMINAL (CONT.)				
.1895	.378	3/8	201022	P-20-3
		1/2	201023	P-20-4
		5/8	201024	P-20-5
		3/4	201025	P-20-6
7/32 x 5/16 NOMINAL				
.219	.3145	5/16	101043	AA-318
		3/8	101044	AA-318-1
7/32 x 7/16 NOMINAL				
.219	.3145	1/2	101045	AA-410-2
.219	.440	3/4	101046	AA-410-3
1/4 x 5/16 NOMINAL				
.2505	.3145	1/4	101047	AA-397-1
		1/2	101048	AA-397
.2515	.3155	1/4	101049	AA-347-2
		3/8	101050	AA-347-3
.252	.3155	1/4	201026	P-25-2
		3/8	201027	P-25-3
		1/2	201028	P-25-4
		3/4	201029	P-25-6
.253	.3155	1/2	101051	AA-335-4
		5/8	101052	AA-335-6
		3/4	101053	AA-335-5
1/4 x 3/8 NOMINAL				
.2505	.377	1/4	101054	AA-304-35
		5/16	101055	AA-304-9
		3/8	101056	AA-304-7
		7/16	101057	AA-304-24
		1/2	101058	AA-304-2
		9/16	101059	AA-304-5
		5/8	101060	AA-304-1
		3/4	101061	AA-304-22
		7/8	101062	AA-304-21
		1	101063	AA-304-20
		1-1/8	101064	AA-304-33
		1-1/4	101065	AA-304-11
		.252	.377	1/4
5/16	101067			AA-307-1
3/8	101068			AA-307-9
1/2	101069			AA-307-3
5/8	101070			AA-307-10
3/4	101071			AA-307-11
1	101072			AA-307-2
1-1/8	101073			AA-307-13

I.D.	O.D.	Length	Item Number	Reference Number
1/4 x 3/8 NOMINAL (CONT.)				
.252	.377	1/4	301020	B-46-2
		5/16	301021	B-46-2-1/2
		3/8	301022	B-46-3
		1/2	301023	B-46-4
		5/8	301024	B-46-5
		3/4	301025	B-46-6
		7/8	301026	B-46-7
		1	301027	B-46-8
		1-1/4	301028	B-46-10
		.252	.378	1/4
3/8	201031			P-26-3
1/2	201032			P-26-4
5/8	201033			P-26-5
3/4	201034			P-26-6
7/8	201035			P-26-7
1	201036			P-26-8
		1-1/8	201037	P-26-9
		1-1/4	201038	P-26-10
.253	.377	1/4	101074	AA-385-1
		1/2	101075	AA-385
		3/4	101076	AA-385-2
1/4 x 7/16 NOMINAL				
.251	.4395	3/8	101077	AA-430
		1/2	101078	AA-430-1
		5/8	101079	AA-430-5
		3/4	101080	AA-430-2
		7/8	101081	AA-430-6
		1	101082	AA-430-3
.252	.439	3/8	301029	B-47-3
		1/2	301030	B-47-4
		5/8	301031	B-47-5
		3/4	301032	B-47-6
		7/8	301033	B-47-7
		1	301034	B-47-8
.252	.4395	3/8	101083	AA-412-10
		1/2	101084	AA-412-7
		5/8	101085	AA-412-6
		3/4	101086	AA-412-1
		1	101087	AA-412-8
.252	.4405	3/8	201039	P-27-3
		1/2	201040	P-27-4
		5/8	201041	P-27-5
		3/4	201042	P-27-6
		7/8	201043	P-27-7
		1	201044	P-27-8
1/4 x 1/2 NOMINAL				
.252	.5015	5/16	101088	AA-519-4
		1/2	101089	AA-519-1
		3/4	101090	AA-519-2
		1	101091	AA-519-3

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
1/4 x 1/2 NOMINAL (CONT.)				
.252	.502	3/8	301035	B-48-3
		1/2	301036	B-48-4
		5/8	301037	B-48-5
		3/4	301038	B-48-6
		7/8	301039	B-48-7
		1	301040	B-48-8
.252	.503	1-1/4	301041	B-48-10
		1/2	201045	P-28-4
		3/4	201046	P-28-6
.252	.503	1	201047	P-28-8
		1-1/4	201048	P-28-10
5/16 x 3/8 NOMINAL				
.3135	.377	1/4	101092	AA-306-11
		5/16	101093	AA-306-1
		3/8	101094	AA-306-3
		1/2	101095	AA-306-7
		5/8	101096	AA-306-8
		3/4	101097	AA-306-6
.314	.377	3/8	301042	B-56-3
		1/2	301043	B-56-4
		5/8	301044	B-56-5
		3/4	301045	B-56-6
		7/8	301046	B-56-7
		1	301047	B-56-8
.3145	.378	1/4	201049	P-31-2
		3/8	201050	P-31-3
		1/2	201051	P-31-4
		5/8	201052	P-31-5
		3/4	201053	P-31-6
		7/8	201054	P-31-7
.3145	.378	1	201055	P-31-8
5/16 x 7/16 NOMINAL				
.3115	.441	3/8	101098	AA-403
		1/2	101099	AA-403-2
.3125	.440	1/4	101100	AA-407-1
		5/16	101101	AA-407-10
		3/8	101102	AA-407-7
		1/2	101103	AA-407-3
		5/8	101104	AA-407-2
		3/4	101105	AA-407-4
.3135	.4395	1/4	101106	AA-401-17
		5/16	101107	AA-401-25
		3/8	101110	AA-401-2
		7/16	101118	AA-401-20
		1/2	101111	AA-401-3
		5/8	101112	AA-401-21
		11/16	101109	AA-401-11
		3/4	101113	AA-401-5
		7/8	101114	AA-401-12
		1	101115	AA-401-1
		1-1/8	101116	AA-401
		1-1/4	101117	AA-401-6
		1-3/8	101118	AA-401-8

I.D.	O.D.	Length	Item Number	Reference Number	
5/16 x 7/16 NOMINAL (CONT.)					
.314	.439	1/4	301048	B-57-2	
		3/8	301049	B-57-3	
		1/2	301050	B-57-4	
		5/8	301051	B-57-5	
		3/4	301052	B-57-6	
		7/8	301053	B-57-7	
		1-1/4	301054	B-57-8	
		1	301055	B-57-10	
		1-3/8	301056	B-57-11	
		.3145	.4405	1/4	201056
3/8	201057			P-32-3	
1/2	201058			P-32-4	
5/8	201059			P-32-5	
3/4	201060			P-32-6	
7/8	201061			P-32-7	
1	201062			P-32-8	
1-1/8	201063			P-32-9	
.3155	.4395	1-1/4	201064	P-32-10	
		1/4	101119	AA-417-7	
		1/2	101120	AA-417	
.3155	.4395	3/4	101121	AA-417-3	
		5/16 x 1/2 NOMINAL			
		.3125	.503	3/8	101122
1/2	101123			AA-520-3	
5/8	101124			AA-520-4	
3/4	101125			AA-520-1	
7/8	101126			AA-520-2	
1	101127			AA-520-5	
.314	.502	3/8	301057	B-58-3	
		1/2	301058	B-58-4	
		5/8	301059	B-58-5	
		3/4	301060	B-58-6	
		7/8	301061	B-58-7	
		1	301062	B-58-8	
		1-1/4	301063	B-58-10	
		1-1/2	301064	B-58-12	
		1-3/4	301065	B-58-14	
		.314	.503	1/4	101128
3/8	101129			AA-506-2	
1/2	101130			AA-506-7	
9/16	101131			AA-506-1	
5/8	101132			AA-506-3	
3/4	101133			AA-506-8	
.3145	.503	1	101134	AA-506-9	
		3/8	201065	P-33-3	
		1/2	201066	P-33-4	
		5/8	201067	P-33-5	
		3/4	201068	P-33-6	
		7/8	201069	P-33-7	
		1	201070	P-33-8	
		1-1/4	201071	P-33-10	
		1-1/2	201072	P-33-12	

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
3/8 x 7/16 NOMINAL				
.3765	.440	1/4	101135	AA-432-4
		3/8	101136	AA-432-2
		1/2	101137	AA-432-1
		3/4	101138	AA-432-3
.377	.4405	1/2	201073	P-37-4
		5/8	201074	P-37-5
		3/4	201075	P-37-6
		1	201076	P-37-8
3/8 x 1/2 NOMINAL				
.375	.503	1/4	101139	AA-521-4
		3/8	101140	AA-521-9
		7/16	101141	AA-521-8
		1/2	101142	AA-521-1
		5/8	101143	AA-521-10
		3/4	101144	AA-521
		7/8	101145	AA-521-2
		1	101146	AA-521-11
		1-1/4	101147	AA-521-12
		.3765	.503	3/16
1/4	101149			AA-507-19
5/16	101150			AA-507-13
3/8	101151			AA-507-11
7/16	101152			AA-507-4
1/2	101153			AA-507-10
5/8	101154			AA-507-5
3/4	101155			AA-507-2
7/8	101156			AA-507-3
1	101157			AA-507-23
1-1/8	101158	AA-507-17		
.377	.502	3/8	301066	B-68-3
		1/2	301067	B-68-4
		5/8	301068	B-68-5
		3/4	301069	B-68-6
		7/8	301070	B-68-7
		1	301071	B-68-8
1-1/4	301072	B-68-10		
.377	.503	1/4	201077	P-38-2
		3/8	201078	P-38-3
		1/2	201079	P-38-4
		5/8	201080	P-38-5
		3/4	201081	P-38-6
		7/8	201082	P-38-7
		1	201083	P-38-8
		1-1/8	201084	P-38-9
		1-1/4	201085	P-38-10
		.378	.5025	1/4
1/2	101160			AA-502
5/8	101161			AA-502-3
3/4	101162			AA-502-1
1	101163			AA-502-2

I.D.	O.D.	Length	Item Number	Reference Number
3/8 x 9/16 NOMINAL				
.3765	.5655	3/8	101164	AA-516-5
		1/2	101165	AA-516-6
		9/16	101166	AA-516-3
		11/16	101167	AA-516
		3/4	101168	AA-516-10
		1	101169	AA-516-8
1-1/4	101170	AA-516-2		
.377	.5645	3/8	301073	B-69-3
		1/2	301074	B-69-4
		5/8	301075	B-69-5
		3/4	301076	B-69-6
		7/8	301077	B-69-7
		1	301078	B-69-8
1-1/4	301079	B-69-10		
.377	.5655	3/8	201086	P-39-3
		1/2	201087	P-39-4
		5/8	201088	P-39-5
		3/4	201089	P-39-6
		7/8	201090	P-39-7
		1	201091	P-39-8
1-1/4	201092	P-39-10		
3/8 x 5/8 NOMINAL				
.376	.627	3/8	101171	AA-630-8
		7/16	101172	AA-630-16
		1/2	101173	AA-630-11
		5/8	101174	AA-630-6
		3/4	101175	AA-630-12
		7/8	101176	AA-630
		1	101177	AA-630-7
		1-1/8	101178	AA-630-1
		1-1/4	101179	AA-630-2
		.377	.627	3/8
1/2	301081			B-610-4
5/8	301082			B-610-5
3/4	301083			B-610-6
7/8	301084			B-610-7
1	301085			B-610-8
1-1/4	301086	B-610-10		
.377	.628	3/8	201093	P-40-3
		1/2	201094	P-40-4
		5/8	201095	P-40-5
		3/4	201096	P-40-6
		7/8	201097	P-40-7
		1	201098	P-40-8
1-1/4	201099	P-40-10		
3/8 x 11/16 NOMINAL				
.3765	.689	3/4	101180	AA-615
		1-1/2	101181	AA-615-2

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number		
3/8 x 3/4 NOMINAL						
.377	.753	1/2	101182	AA-707-2		
		3/4	101183	AA-707-3		
		1	101184	AA-707		
		1-1/4	101185	AA-707-4		
.377	.753	3/8	301087	B-612-3		
		1/2	301088	B-612-4		
		3/4	301089	B-612-6		
		1	301090	B-612-8		
		1-1/4	301091	B-612-10		
.377	.753	3/8	201100	P-41-3		
		1/2	201101	P-41-4		
		3/4	201102	P-41-6		
		1	201103	P-41-8		
		1-1/4	201104	P-41-10		
7/16 x 9/16 NOMINAL						
.439	.5645	3/8	301092	P-79-3		
		1/2	301093	B-79-4		
		5/8	301094	B-79-5		
		3/4	301095	B-79-6		
		7/8	301096	B-79-7		
		1	301097	B-79-8		
.439	.565	1-1/4	301098	B-79-10		
		5/16	101186	AA-515-1		
		3/8	101187	AA-515-21		
		1/2	101188	AA-515-2		
		5/8	101189	AA-515-3		
		3/4	101190	AA-515		
		13/16	101191	AA-515-12		
		15/16	101192	AA-515-6		
		1	101193	AA-515-8		
		.4395	.5655	3/8	201105	P-43-3
1/2	201106			P-43-4		
5/8	201107			P-43-5		
3/4	201108			P-43-6		
7/8	201109			P-43-7		
1	201110			P-43-8		
1-1/4	201111			P-43-10		
7/16 x 5/8 NOMINAL						
.439	.627	3/8	101194	AA-627-5		
		7/16	101195	AA-627-13		
		1/2	101196	AA-627-8		
		5/8	101197	AA-627-3		
		3/4	101198	AA-627		
		1	101199	AA-627-4		
		1-1/4	101200	AA-627-1		
		1-1/2	101201	AA-627-7		
		.439	.628	3/8	301099	B-710-3
				1/2	301100	B-710-4
5/8	301101			B-710-5		
3/4	301102			B-710-6		
7/8	301103			B-710-7		
1	301104			B-710-8		
1-1/4	301105			B-710-10		

I.D.	O.D.	Length	Item Number	Reference Number
7/16 x 5/8 NOMINAL (CONT.)				
.4395	.628	3/8	201112	P-44-3
		1/2	201113	P-44-4
		5/8	201114	P-44-5
		3/4	201115	P-44-6
		7/8	201116	P-44-7
		1	201117	P-44-8
		1-1/4	201118	P-44-10
.4395	.628	1-1/2	201119	P-44-12
		7/16 x 11/16 NOMINAL		
.439	.690	1/2	301106	B-711-4
		1	301107	B-711-8
		1-1/2	301108	B-711-12
.4395	.6905	1/2	201120	P-45-4
		1	201121	P-45-8
		1-1/2	201122	P-45-12
1/2 x 5/8 NOMINAL				
.5015	.628	5/16	101202	AA-628-21
		3/8	101203	AA-628-7
		7/16	101204	AA-628-8
		1/2	101205	AA-628-10
		9/16	101206	AA-628-3
		5/8	101207	AA-628-25
		11/16	101208	AA-628-12
		3/4	101209	AA-628-6
		7/8	101210	AA-628-20
		1	101211	AA-628
		1-1/4	101212	AA-628-11
		1-1/2	101213	AA-628-5
.502	.628	1/2	301109	B-810-4
		5/8	301110	B-810-5
		3/4	301111	B-810-6
		7/8	301112	B-810-7
		1	301113	B-810-8
		1-1/8	301114	B-810-9
		1-1/4	301115	B-810-10
1-1/2	301116	B-810-12		
.502	.628	3/8	201123	P-50-3
		1/2	201124	P-50-4
		5/8	201125	P-50-5
		3/4	201126	P-50-6
		7/8	201124	P-50-7
		1	201128	P-50-8
		1-1/8	201129	P-50-9
1-1/4	201130	P-50-10		
1-1/2	201131	P-50-12		
.5025	.629	1/2	101214	AA-607-1
		5/8	101215	AA-607-2
		3/4	101216	AA-607-5
		1	101217	AA-607-3
		1-1/4	101218	AA-607-6
.504	.6275	1/2	101219	AA-634-4
		1	101220	AA-634-5

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
1/2 x 11/16 NOMINAL				
.5015	.690	3/8	101221	AA-650-4
		1/2	101222	AA-650-1
		9/16	101223	AA-650-6
		5/8	101224	AA-650-9
		3/4	101225	AA-650
		7/8	101226	AA-650-7
		1	101227	AA-650-2
		1-1/8	101228	AA-650-5
		1-1/4	101229	AA-650-12
		1-1/2	101230	AA-650-3
		.502	.690	1/2
5/8	301118			B-811-5
3/4	301119			B-811-6
7/8	301120			B-811-7
1	301121			B-811-8
1-1/8	301122			B-811-9
1-1/4	301123			B-811-10
1-1/2	301124	B-811-12		
.502	.6905	1/2	201132	P-51-4
		5/8	201133	P-51-5
		3/4	201134	P-51-6
		7/8	201135	P-51-7
		1	201136	P-51-8
		1-1/8	201137	P-51-9
.5025	.689	3/8	101231	AA-631-13
		3/4	101232	AA-631
		1-1/4	101233	AA-631-1
.504	.690	1/4	101234	AA-618-16
		1/2	101235	AA-618-1
		9/16	101236	AA-618-13
		5/8	101237	AA-618-12
		3/4	101238	AA-618-11
		7/8	101239	AA-618-8
		1	101240	AA-618-6
		1-1/8	101241	AA-618-2
1-3/8	101242	AA-618-5		
1/2 x 3/4 NOMINAL				
.5005	.752	1/2	101243	AA-742-1
		3/4	101244	AA-742-2
		1	101245	AA-742
		1-1/8	101246	AA-742-4
		1-1/4	101247	AA-742-3
.5015	.752	1/2	101248	AA-753
		9/16	101249	AA-753-1
		3/4	101250	AA-753-5
		1	101251	AA-753-2
		1-1/2	101252	AA-753-4

I.D.	O.D.	Length	Item Number	Reference Number
1/2 x 3/4 NOMINAL (CONT.)				
.502	.753	1/2	301125	B-812-4
		5/8	301126	B-812-5
		3/4	301127	B-812-6
		7/8	301128	B-812-7
		1	301129	B-812-8
		1-1/8	301130	B-812-9
		1-1/4	301131	B-812-10
		1-1/2	301132	B-812-12
		1-3/4	301133	B-812-14
		2	301134	B-812-16
		.502	.753	3/8
1/2	201141			P-52-4
5/8	201142			P-52-5
3/4	201143			P-52-6
7/8	201144			P-52-7
1	201145			P-52-8
1-1/8	201146			P-52-9
1-1/4	201147			P-52-10
1-1/2	201148			P-52-12
1-3/4	201149			P-52-14
2	201150			P-52-16
.5025	.753	1/2	101253	AA-744-5
		5/8	101254	AA-744-9
		3/4	101255	AA-744-4
		7/8	101256	AA-744-10
		1	101257	AA-744-3
		1-1/4	101258	AA-744
.502	.8165	1-1/2	101259	AA-744-1
		1-3/4	101260	AA-744-2
		1-3/4	101260	AA-744-2
1/2 x 13/16 NOMINAL				
.501	.815	3/4	101261	AA-866-3
		1	101262	AA-866-1
		1-1/2	101263	AA-866-4
.502	.815	1/2	301135	B-813-4
		3/4	301136	B-813-6
		1	301137	B-813-8
		1-1/2	301138	B-813-12
.502	.8165	1/2	201151	P-53-4
		3/4	201152	P-53-6
		1	201153	P-53-8
		1-1/2	201154	P-53-12
1/2 x 7/8 NOMINAL				
.502	.878	1/2	301139	B-814-4
		5/8	301140	B-814-5
		3/4	301141	B-814-6
		7/8	301142	B-814-7
		1	301143	B-814-8
		1-1/4	301144	B-814-10
1-1/2	301145	B-814-12		

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
1/2 x 7/8 NOMINAL (CONT.)				
.502	.879	1/2	201155	P-54-4
		5/8	201156	P-54-5
		3/4	201157	P-54-6
		7/8	201158	P-54-7
		1	201159	P-54-8
		1-1/4	201160	P-54-10
	1-1/2	201161	P-54-12	
.503	.879	1/2	101264	AA-842-7
		3/4	101265	AA-842-4
		1	101266	AA-842-3
		1-1/4	101267	AA-842-2
		1-1/2	101268	AA-842
1/2 x 1 NOMINAL				
.502	1.004	3/4	201162	P-55-6
		1	201163	P-55-8
		1-1/2	201164	P-55-12
		2	201165	P-55-16
9/16 x 11/16 NOMINAL				
.5635	.691	7/16	101269	AA-620-3
		1/2	101270	AA-620-7
		5/8	101271	AA-620-8
		3/4	101272	AA-620-1
		1	101273	AA-620
		1-1/4	101274	AA-620-5
.5645	.6905	1/2	201166	P-56-4
		3/4	201167	P-56-6
		1	201168	P-56-8
		1-1/4	201169	P-56-10
		1-1/2	201170	P-56-12
.565	.691	1/2	301146	B-911-4
		3/4	301147	B-911-6
		1	301148	B-911-8
		1-1/2	301149	B-911-12
.568	.689	1-1/8	101275	AA-658-5
		1 1/2	101276	AA-658-1
		2-3/8	101277	AA-658
9/16 x 3/4 NOMINAL				
.5635	.7535	5/8	101278	AA-711-6
		3/4	101279	AA-711-1
		1	101280	AA-711-3
		1-1/4	101281	AA-711-5
		1-3/8	101282	AA-711
		1-1/2	101283	AA-711-2
.5645	.753	1/2	201171	P-57-4
		3/4	201172	P-57-6
		1	201173	P-57-8
		1-1/4	201174	P-57-10
		1-1/2	201175	P-57-12
.565	.753	1/2	301150	B-912-4
		3/4	301151	B-912-6
		1	301152	B-912-8
		1-1/2	301153	B-912-12

I.D.	O.D.	Length	Item Number	Reference Number
9/16 x 3/4 NOMINAL (CONT.)				
.566	.753	1/2	101284	AA-709-7
		3/4	101285	AA-709-8
		1	101286	AA-709
		1-1/4	101287	AA-709-5
		1-1/2	101288	AA-709-6
9/16 x 13/16 NOMINAL				
.563	.815	3/4	101289	AA-807-3
		1	101290	AA-807-2
		1-1/4	101291	AA-807-4
.5645	.8165	1/2	201176	P-58-4
		3/4	201177	P-58-6
		1	201178	P-58-8
		1-1/4	201179	P-58-10
		1-1/2	201180	P-58-12
.565	.815	1/2	301154	B-913-4
		3/4	301155	B-913-6
		1	301156	B-913-8
		1-1/4	301157	B-913-10
		1-1/2	301158	B-913-12
9/16 x 7/8 NOMINAL				
.567	.877	1	101292	AA-863-3
		1-3/8	101293	AA-863
5/8 x 3/4 NOMINAL				
.626	.753	1/2	101294	AA-724-8
		7/8	101295	AA-724-2
		1	101296	AA-724-3
		1-1/8	101297	AA-724
		1-1/4	101298	AA-724-5
.627	.752	1/2	101299	AA-741
		5/8	101300	AA-741-1
		3/4	101301	AA-741-4
.627	.753	3/8	101302	AA-710-13
		1/2	101303	AA-710-27
		5/8	101304	AA-710-19
		3/4	101305	AA-710-6
		7/8	101306	AA-710-16
		1	101307	AA-710-3
		1-1/8	101308	AA-710-8
1-1/4	101309	AA-710-5		
1-1/2	101310	AA-710-4		
.627	.753	1/2	201181	P-62-4
		5/8	201182	P-62-5
		3/4	201183	P-62-6
		7/8	201184	P-62-7
		1	201185	P-62-8
		1-1/8	201186	P-62-9
		1-1/4	201187	P-62-10
		1-1/2	201188	P-62-12

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number		
5/8 x 3/4 NOMINAL (CONT.)						
.628	.753	1/2	301159	B-1012-4		
		5/8	301160	B-1012-5		
		3/4	301161	B-1012-6		
		7/8	301162	B-1012-7		
		1	301163	B-1012-8		
		1-1/8	301164	B-1012-9		
		1-1/4	301165	B-1012-10		
		1-1/2	301166	B-1012-12		
		5/8 x 13/16 NOMINAL				
		.625	.815	1/2	101311	AA-810-4
5/8	101312			AA-810-2		
3/4	101313			AA-810-10		
7/8	101314			AA-810-1		
1	101315			AA-810-7		
1-1/4	101316			AA-810-11		
1-3/8	101317			AA-810		
1-1/2	101318			AA-810-12		
.627	.815			3/4	101319	AA-811-7
				1	101320	AA-811-6
		1-1/4	101321	AA-811-2		
		1-3/8	101322	AA-811-5		
		1-1/2	101323	AA-811-3		
		1-3/4	101324	AA-811-1		
		1.99	101325	AA-811		
		.627	.815	1/2	301167	B-1013-4
5/8	301168			B-1013-5		
3/4	301169			B-1013-6		
7/8	301170			B-1013-7		
1	301171			B-1013-8		
1-1/4	301172			B-1013-10		
1-1/2	301173			B-1013-12		
2	301174			B-1013-16		
.627	.8165	1/2	201189	P-63-4		
		5/8	201190	P-63-5		
		3/4	201191	P-63-6		
		7/8	201192	P-63-7		
		1	201193	P-63-8		
		1-1/4	201194	P-63-10		
		1-1/2	201195	P-63-12		
		1-3/4	201196	P-63-14		
.628	.8155	5/8	101326	AA-814-3		
		3/4	101327	AA-814-2		
		1	101328	AA-814		
		1-1/4	101329	AA-814-5		
		5/8 x 7/8 NOMINAL				
.625	.877	1/2	101330	AA-880-4		
		3/4	101331	AA-880-2		
		1	101332	AA-880-1		
		1-1/2	101333	AA-880		

I.D.	O.D.	Length	Item Number	Reference Number		
5/8 x 7/8 NOMINAL (CONT.)						
.627	.878	1/2	101334	AA-832-11		
		5/8	101335	AA-832-12		
		3/4	101336	AA-832-6		
		7/8	101337	AA-832-8		
		1	101338	AA-832-1		
		1-1/8	101339	AA-832-13		
		1-1/4	101340	AA-832-4		
		1-3/8	101341	AA-832-2		
		1-1/2	101342	AA-832-5		
		1-5/8	101343	AA-832-9		
		2	101344	AA-832-18		
		.627	.878	5/8	301175	B-1014-5
				3/4	301176	B-1014-6
				7/8	301177	B-1014-7
				1	301178	B-1014-8
1-1/4	301179			B-1014-10		
1-1/2	301180			B-1014-12		
.627	.879	1-3/4	301181	B-1014-14		
		2	301182	B-1014-16		
		1/2	201197	P-64-4		
		5/8	201198	P-64-5		
		3/4	201199	P-64-6		
		7/8	201200	P-64-7		
		1	201201	P-64-8		
		1-1/8	201202	P-64-9		
.627	.879	1-1/4	201203	P-64-10		
		1-1/2	201204	P-64-12		
		1-3/4	201205	P-64-14		
		2	201206	P-64-16		
		5/8 x 15/16 NOMINAL				
		.627	.9415	5/8	201207	P-65-5
				3/4	201208	P-65-6
				1	201209	P-65-8
.628	.940	5/8	101345	AA-946-4		
		3/4	101346	AA-946-2		
		1	101347	AA-946-1		
5/8 x 1 NOMINAL						
.627	1.003	1/2	301183	B-1016-4		
		5/8	301184	B-1016-5		
		3/4	301185	B-1016-6		
		7/8	301186	B-1016-7		
		1	301187	B-1016-8		
		1-1/4	301188	B-1016-10		
		1-1/2	301189	B-1016-12		
		1-3/4	301190	B-1016-14		
		2	301191	B-1016-16		

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
5/8 x 1 NOMINAL (CONT.)				
.627	1.004	1/2	201210	P-66-4
			201211	P-66-5
		3/4	201212	P-66-6
			201213	P-66-7
		1	201214	P-66-8
			201215	P-66-10
		1-1/2	201216	P-66-12
		1-3/4	201217	P-66-14
		2	201218	P-66-16
		.628	1.0035	3/4
101349	AA-1011-5			
7/8	101350			AA-1011-3
	101351			AA-1011-4
1-1/4	101352			AA-1011-1
1-3/8	101353			AA-1011-13
1-1/2	101354			AA-1011
11/16 x 13/16 NOMINAL				
.6885	.815	1	101355	AA-812-1
		1-1/4	101356	AA-812
11/16 x 7/8 NOMINAL				
.6895	.879	3/4	201219	P-68-6
			201220	P-68-8
		1-1/4	201221	P-68-10
			201222	P-68-12
		1-1/2	201223	P-68-14
		1-3/4	201224	P-68-16
		.690	.878	1/2
101358	AA-851-7			
1	101359			AA-851-8
	101360			AA-851-6
1-1/4	101361			AA-851-1
.690	.878			3/4
		301193	B-1114-8	
		1-1/4	301194	B-1114-10
			301195	B-1114-12
		1-1/2	301196	B-1114-14
		1-3/4	301197	B-1114-16
		2	301197	B-1114-16
11/16 x 15/16 NOMINAL				
.689	.941	1	101362	AA-939-3
		1-1/4	101363	AA-939-2
		1-1/2	101364	AA-939-4
3/4 x 7/8 NOMINAL				
.751	.878	9/16	101365	AA-838-9
			101366	AA-838-25
		5/8	101367	AA-838-16
			101368	AA-838-6
		1	101369	AA-838-7
			101370	AA-838-13
		1-1/4	101371	AA-838-5
		1-3/8	101372	AA-838-15
		1-1/2	101373	AA-838-4
		1-5/8	101374	AA-838-8

I.D.	O.D.	Length	Item Number	Reference Number		
3/4 x 7/8 NOMINAL (CONT.)						
.752	.878	3/4	101375	AA-885		
			101376	AA-885-3		
		1-1/4	101377	AA-885-4		
.752	.879	1/2	201225	P-75-4		
			201226	P-75-5		
		5/8	201227	P-75-6		
			201228	P-75-7		
		7/8	201229	P-75-8		
			201230	P-75-9		
		1-1/8	201231	P-75-10		
		1-1/4	201232	P-75-12		
		1-1/2	201233	P-75-13		
		.753	.878	5/8	101378	AA-839-1
101379	AA-839-3					
11/16	101380			AA-839-6		
	101381			AA-839-13		
3/4	101382			AA-839-2		
	101383			AA-839-4		
1-1/2	101384			AA-839-7		
.753	.878	1/2	301198	B-1214-4		
			301199	B-1214-5		
		5/8	301200	B-1214-6		
			301201	B-1214-7		
		7/8	301202	B-1214-8		
			301203	B-1214-10		
		1	301204	B-1214-12		
		1-1/2	301205	B-1214-13		
1-5/8	301205	B-1214-13				
3/4 x 15/16 NOMINAL						
.7515	.940	3/4	101385	AA-921-5		
			101386	AA-921-4		
		1	101387	AA-921-2		
			101388	AA-921-3		
		1-1/4	101389	AA-921-1		
			101390	AA-921		
		1-1/2	101391	AA-921-6		
			2	101391	AA-921-6	
		.752	.9415	1/2	201234	P-76-4
					201235	P-76-5
5/8	201236			P-76-6		
	201237			P-76-7		
7/8	201238			P-76-8		
	201239			P-76-9		
1	201240			P-76-10		
	201241			P-76-12		
1-1/2	201242			P-76-13		
	201243			P-76-14		
1-3/4	201244	P-76-15				
	201245	P-76-16				
.752	.942	1	101392	AA-912		
			101393	AA-912-4		
		1-1/4	101394	AA-912-1		
			101395	AA-912-6		
		1-1/2	101396	AA-912-2		
			101397	AA-912-7		

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
3/4 x 15/16 NOMINAL (CONT.)				
.753	.9405	1/2	301206	B-1215-4
		5/8	301207	B-1215-5
		3/4	301208	B-1215-6
		7/8	301209	B-1215-7
		1	301210	B-1215-8
		1-1/4	301211	B-1215-10
		1-1/2	301212	B-1215-12
		1-3/4	301213	B-1215-14
		2	301214	B-1215-16
		3/4 x 1 NOMINAL		
.7505	1.0025	3/4	101398	AA-1005-5
		1	101399	AA-1005-7
		1-1/8	101400	AA-1005-3
		1-1/4	101401	AA-1005-2
		1-1/2	101402	AA-1005-4
.752	1.0025	3/8	101403	AA-1049-18
		1/2	101404	AA-1049-14
		3/4	101405	AA-1049-1
		7/8	101406	AA-1049-2
		1	101407	AA-1049-3
		1-1/8	101408	AA-1049-16
		1-1/4	101409	AA-1049
		1-3/8	101410	AA-1049-17
		1-1/2	101411	AA-1049-4
		1-3/4	101412	AA-1049-9
		2	101413	AA-1049-5
		2-1/8	101414	AA-1049-11
		2-1/4	101415	AA-1049-12
2-1/2	101416	AA-1049-6		
.752	1.004	1/2	201246	P-77-4
		5/8	201247	P-77-5
		3/4	201248	P-77-6
		7/8	201249	P-77-7
		1	201250	P-77-8
		1-1/8	201251	P-77-9
		1-1/4	201252	P-77-10
		1-1/2	201253	P-77-12
		1-3/4	201254	P-77-14
		2	201255	P-77-16
2-1/2	201256	P-77-20		
.753	1.003	3/4	101417	AA-1043-6
		7/8	101418	AA-1043-8
		1	101419	AA-1043-9
		1-1/4	101420	AA-1043
		1-1/2	101421	AA-1043-4

I.D.	O.D.	Length	Item Number	Reference Number
3/4 x 1 NOMINAL (CONT.)				
.753	1.003	1/2	301215	B-1216-4
		5/8	301216	B-1216-5
		3/4	301217	B-1216-6
		7/8	301218	B-1216-7
		1	301219	B-1216-8
		1-1/8	301220	B-1216-9
		1-1/4	301221	B-1216-10
		1-1/2	301222	B-1216-12
		1-3/4	301223	B-1216-14
		2	301224	B-1216-16
2-1/2	301225	B-1216-20		
3/4 x 1-1/16 NOMINAL				
.751	1.0645	1	101422	AA-1039
		1-1/4	101423	AA-1039-2
3/4 x 1-1/8 NOMINAL				
.750	1.129	3/4	101424	AA-1130-3
		1-1/4	101425	AA-1130
.752	1.129	1/2	201257	P-78-4
		3/4	201258	P-78-6
		1	201259	P-78-8
		1-1/4	201260	P-78-10
		1-1/2	201261	P-78-12
		1-3/4	201262	P-78-14
.753	1.128	2	201263	P-78-16
		3/4	101426	AA-1106-2
		1	101427	AA-1106-4
		1-1/4	101428	AA-1106-3
		1-3/8	101429	AA-1106-13
		1-1/2	101430	AA-1106
1-3/4	101431	AA-1106-1		
.753	1.128	1/2	301226	B-1218-4
		3/4	301227	B-1218-6
		1	301228	B-1218-8
		1-1/4	301229	B-1218-10
		1-1/2	301230	B-1218-12
		1-3/4	301231	B-1218-14
		2	301232	B-1218-16
		2	301232	B-1218-16
3/4 x 1-1/4 NOMINAL				
.752	1.254	3/4	201264	P-79-6
		1	201265	P-79-8
		1-1/4	201266	P-79-10
		1-1/2	201267	P-79-12
.753	1	1	101432	AA-1257
		1-1/4	101433	AA-1257-1
		1-1/2	101434	AA-1257-2
.753	1.253	3/4	301233	B-1220-6
		1	301234	B-1220-8
		1-1/4	301235	B-1220-10
		1-1/2	301236	B-1220-12
		1-3/4	301237	B-1220-14
		2	301238	B-1220-16
		2	301238	B-1220-16

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
13/16 x 1 NOMINAL				
.8135	1.003	1	101435	AA-1056-5
		1-1/4	101436	AA-1056-3
		1-3/4	101437	AA-1056
.8145	1.003	7/8	101438	AA-1041-2
		1	101439	AA-1041-5
		1-1/4	101440	AA-1041-6
.8145	1.004	3/4	201268	P-81-6
		1	201269	P-81-8
		1-1/4	201270	P-81-10
		1-1/2	201271	P-81-12
		1-3/4	201272	P-81-14
.8155	1.003	3/4	301239	B-1316-6
		1	301240	B-1316-8
		1-1/4	301241	B-1316-10
		1-1/2	301242	B-1316-12
		1-3/4	301243	B-1316-14
		2	301244	B-1316-16
13/16 x 1-1/16 NOMINAL				
.8145	1.0665	1	201273	P-82-8
		1-1/4	201274	P-82-10
7/8 x 1 NOMINAL				
.876	1.003	3/8	101441	AA-1008-11
		7/16	101442	AA-1008-14
		1/2	101443	AA-1008-9
		5/8	101444	AA-1008-13
		3/4	101445	AA-1008-5
		1	101446	AA-1008-6
		1-1/4	101447	AA-1008-1
		1-1/2	101448	AA-1008-2
		1-3/4	101449	AA-1008-10
		.877	1.003	5/8
3/4	101451			AA-1009-8
1	101452			AA-1009-3
1-1/8	101453			AA-1009
1-1/4	101454			AA-1009-2
.877	1.004	3/4	201275	P-87-6
		7/8	201276	P-87-7
		1	201277	P-87-8
		1-1/4	201278	P-87-10
		1-1/2	201279	P-87-12
		1-3/4	201280	P-87-14
.878	1.003	3/4	301245	B-1416-6
		7/8	301246	B-1416-7
		1	301247	B-1416-8
		1-1/4	301248	B-1416-10
		1-1/2	301249	B-1416-12
7/8 x 1-1/16 NOMINAL				
.877	1.065	3/4	101455	AA-1051-3
		1-1/4	101456	AA-1051-2

I.D.	O.D.	Length	Item Number	Reference Number		
7/8 x 1-1/16 NOMINAL (CONT.)						
.877	1.0665	1	201281	P-88-8		
		1-1/4	201282	P-88-10		
		1-1/2	201283	P-88-12		
7/8 x 1-1/8 NOMINAL						
.876	1.128	3/4	101457	AA-1108		
		7/8	101458	AA-1108-15		
		1	101459	AA-1108-1		
		1-1/8	101460	AA-1108-2		
		1-1/4	101461	AA-1108-7		
		1-3/8	101462	AA-1108-16		
		1-1/2	101463	AA-1108-12		
		1-3/4	101464	AA-1108-10		
		2	101465	AA-1108-3		
		2-1/4	101466	AA-1108-11		
		2-1/2	101467	AA-1108-5		
		2-3/4	101468	AA-1108-6		
.877	1.129	3/4	201284	P-89-6		
		7/8	201285	P-89-7		
		1	201286	P-89-8		
		1-1/8	201287	P-89-9		
		1-1/4	201288	P-89-10		
		1-3/8	201289	P-89-11		
		1-1/2	201290	P-89-12		
		1-5/8	201291	P-89-13		
		1-3/4	201292	P-89-14		
		2	201293	P-89-16		
.878	1.1275	2-1/4	201294	P-89-18		
		2-1/2	201295	P-89-20		
		1	101469	AA-1104-2		
		1-1/4	101470	AA-1104-5		
.878	1.128	1-3/8	101471	AA-1104-4		
		1-1/2	101472	AA-1104-3		
		3/4	301250	B-1418-6		
.878	1.128	7/8	301251	B-1418-7		
		1	301252	B-1418-8		
		1-1/8	301253	B-1418-9		
		1-1/4	301254	B-1418-10		
		1-3/8	301255	B-1418-11		
		1-1/2	301256	B-1418-12		
		1-3/4	301257	B-1418-14		
		2	301258	B-1418-16		
		2-1/2	301259	B-1418-20		
		7/8 x 1-1/4 NOMINAL				
		.877	1.252	1	101473	AA-1203-3
1-1/4	101474			AA-1203		
1-1/2	101475			AA-1203-1		
.877	1.254	3/4	201296	P-90-6		
		1	201297	P-90-8		
		1-1/4	201298	P-90-10		
		1-1/2	201299	P-90-12		
		2	201300	P-90-16		

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
7/8 x 1-1/4 NOMINAL (CONT.)				
.878	1.253	3/4	101476	AA-1242-2
		1	101477	AA-1242-3
		1-3/8	101478	AA-1242
.878	1.253	3/4	301260	B-1420-6
		1	301261	B-1420-8
		1-1/4	301262	B-1420-10
		1-1/2	301263	B-1420-12
		2	301264	B-1420-16
15/16 x 1-1/16 NOMINAL				
.940	1.065	3/4	101479	AA-1087-1
		1-1/4	101480	AA-1087
15/16 x 1-3/16 NOMINAL				
.939	1.1895	7/8	101481	AA-1118-6
		1	101482	AA-1118-4
		1-1/4	101483	AA-1118-2
		1-1/2	101484	AA-1118-5
.9395	1.1915	3/4	201301	P-93-6
		1	201302	P-93-8
		1-1/4	201303	P-93-10
		1-1/2	201304	P-93-12
		2	201305	P-93-16
.9405	1.1905	3/4	301265	B-1519-6
		1	301266	B-1519-8
		1-1/4	301267	B-1519-10
		1-1/2	301268	B-1519-12
2	301269	B-1519-16		
15/16 x 1-1/4 NOMINAL				
.9375	1.253	1	101485	AA-1206-1
		1-1/4	101486	AA-1206-4
		1-1/2	101487	AA-1206-2
.9395	1.254	3/4	201306	P-94-6
		1	201307	P-94-8
		1-1/4	201308	P-94-10
		1-1/2	201309	P-94-12
		1-3/4	201310	P-94-14
		2	201311	P-94-16
.940	1.254	1-1/2	101488	AA-1216-3
		2	101489	AA-1216
.9405	1.253	3/4	301270	B-1520-6
		1	301271	B-1520-8
		1-1/4	301272	B-1520-10
		1-1/2	301273	B-1520-12
		1-3/4	301274	B-1520-14
		2	301275	B-1520-16

I.D.	O.D.	Length	Item Number	Reference Number
1 x 1-1/8 NOMINAL				
1.001	1.128	1/2	101490	AA-1110-8
		3/4	101491	AA-1110-10
		13/16	101492	AA-1110-2
		1	101493	AA-1110-1
		1-1/4	101494	AA-1110-3
		1-3/8	101495	AA-1110-12
		1-1/2	101496	AA-1110
1.003	1.128	3/4	301276	B-1618-6
		1	301277	B-1618-8
		1-1/4	301278	B-1618-10
		1-1/2	301279	B-1618-12
		1-3/4	301280	B-1618-14
2	301281	B-1618-16		
1.003	1.129	3/4	201312	P-100-6
		1	201313	P-100-8
		1-1/4	201314	P-100-10
		1-1/2	201315	P-100-12
		1-3/4	201316	P-100-14
		2	201317	P-100-16
1.0035	1.128	3/4	101497	AA-1156
		7/8	101498	AA-1156-4
		1-1/4	101499	AA-1156-3
		1-1/2	101500	AA-1156-1
1 x 1-3/16 NOMINAL				
1.002	1.1895	3/4	101501	AA-1154-2
		1	101502	AA-1154-1
		1-1/2	101503	AA-1154-3
2	101504	AA-1154		
1.003	1.1915	3/4	201318	P-101-6
		1	201319	P-101-8
		1-1/4	201320	P-101-10
		1-1/2	201321	P-101-12
		1-3/4	201322	P-101-14
		2	201323	P-101-16
1 x 1-1/4 NOMINAL				
1.001	1.252	1/2	101505	AA-1212-7
		3/4	101506	AA-1212-6
		1	101507	AA-1212-2
		1-1/4	101508	AA-1212-16
		1-1/2	101509	AA-1212-11
		1-3/4	101510	AA-1212-4
		2	101511	AA-1212-3
		2-1/4	101512	AA-1212-5
		2-1/2	101513	AA-1212
		2-7/8	101514	AA-1212-8
		3	101515	AA-1212-14

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number		
1 x 1-1/4 NOMINAL (CONT.)						
1.002	1.252	7/8	101516	AA-1213-6		
		1	101517	AA-1212-3		
		1-1/8	101518	AA-1213-10		
		1-1/4	101519	AA-1213-12		
		1-1/2	101520	AA-1213-1		
		1-3/4	101521	AA-1213-2		
		2	101522	AA-1213		
		2-1/2	101523	AA-1213-14		
		3	101524	AA-1213-15		
		1.003	1.253	3/4	101525	AA-1232-6
1	101526			AA-1232		
1-1/8	101527			AA-1232-2		
1-1/4	101528			AA-1232-3		
1-1/2	101529			AA-1232-7		
1-3/4	101530			AA-1232-8		
2	101531			AA-1232-4		
2-1/2	101532			AA-1232-5		
1.003	1.253			3/4	301282	B-1620-6
				7/8	301283	B-1620-7
		1	301284	B-1620-8		
		1-1/4	301285	B-1620-10		
		1-3/8	301286	B-1620-11		
		1-1/2	301287	B-1620-12		
		1-3/4	301288	B-1620-14		
		2	301289	B-1620-16		
		2-1/4	301290	B-1620-18		
		2-1/2	301291	B-1620-20		
3	301292	B-1620-24				
1.003	1.254	1/2	201324	P-102-4		
		3/4	201325	P-102-6		
		7/8	201326	P-102-7		
		1	201327	P-102-8		
		1-1/4	201328	P-102-10		
		1-3/8	201329	P-102-11		
		1-1/2	201330	P-102-12		
		1-3/4	201331	P-102-14		
		2	201332	P-102-16		
		2-1/4	201333	P-102-18		
2-1/2	201334	P-102-20				
3	201335	P-102-24				
1.005	1.2525	1	101533	AA-1204-7		
		1-1/4	101534	AA-1204-2		
		1-3/8	101535	AA-1204-1		
		1-1/2	101536	AA-1204		
		2	101537	AA-1204-3		
		2-1/4	101538	AA-1204-5		
2-1/2	101539	AA-1204-4				
1 x 1-5/16 NOMINAL						
1.001	1.316	1	101540	AA-1304-3		
		1-1/2	101541	AA-1304		
		1-3/4	101542	AA-1304-4		
		2	101543	AA-1304-6		

I.D.	O.D.	Length	Item Number	Reference Number
1 x 1-5/16 NOMINAL (CONT.)				
1.002	1.315	1	101544	AA-1325-10
		1-1/4	101545	AA-1325-8
		1-1/2	101546	AA-1325-4
		1-5/8	101547	AA-1325-7
		1-3/4	101548	AA-1325-5
		2	101549	AA-1325
		2-1/2	101550	AA-1325-1
		2-3/4	101551	AA-1325-3
		3	101552	AA-1325-2
		1.003	1.3155	1
1-1/4	301294			B-1621-10
1-1/2	301295			B-1621-12
1-3/4	301296			B-1621-14
2	301297			B-1621-16
2-1/2	301298			B-1621-20
3	301299	B-1621-24		
1.003	1.3165	1	201336	P-103-8
		1-1/4	201337	P-103-10
		1-1/2	201338	P-103-12
		1-3/4	201339	P-103-14
		2	201340	P-103-16
		2-1/2	201341	P-103-20
3	201342	P-103-24		
1 x 1-3/8 NOMINAL				
1.001	1.378	3/4	101553	AA-1334-3
		1-1/4	101554	AA-1334-5
		1-1/2	101555	AA-1334-1
		2	101556	AA-1334-2
1.003	1.377	1	101557	AA-1310-2
		1-1/8	101558	AA-1310-1
		1-1/4	101559	AA-1310-4
		1-3/8	101560	AA-1310
		1-1/2	101561	AA-1310-5
		1-3/4	101562	AA-1310-8
2	101563	AA-1310-3		
2-1/4	101564	AA-1310-6		
1.003	1.378	1	301300	B-1622-8
		1-1/4	301301	B-1622-10
		1-1/2	301302	B-1622-12
		1-3/4	301303	B-1622-14
		2	301304	B-1622-16
2-1/2	301305	B-1622-20		
3	301306	B-1622-24		
1.003	1.379	1	201343	P-104-8
		1-1/4	201344	P-104-10
		1-1/2	201345	P-104-12
		1-3/4	201346	P-104-14
		2	201347	P-104-16
		2-1/2	201348	P-104-20

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
1 x 1-1/2 NOMINAL				
1.003	1.503	1	301307	B-1624-8
		1-1/4	301308	B-1624-10
		1-1/2	301309	B-1624-12
		2	301310	B-1624-16
		2-1/2	301311	B-1624-20
		3	301312	B-1624-24
1.003	1.504	1	201349	P-105-8
		1-1/4	201350	P-105-10
		1-1/2	201351	P-105-12
		1-3/4	201352	P-105-14
		2	201353	P-105-16
		2-1/2	201354	P-105-20
		3	201355	P-105-24
1.0035	1.5045	1	101565	AA-1511-7
		1-1/4	101566	AA-1511-8
		1-1/2	101567	AA-1511-5
		2	101568	AA-1511-1
1-1/16 x 1-5/16 NOMINAL				
1.064	1.317	3/4	101569	AA-1307-2
		1	101570	AA-1307-4
		1-1/4	101571	AA-1307-5
		1-1/2	101572	AA-1307-1
1.0655	1.3155	1	301313	B-1721-8
		1-1/2	301314	B-1721-12
		2	301315	B-1721-16
		2-1/2	301316	B-1721-20
1.0655	1.3165	1	201356	P-106-8
		1-1/2	201357	P-106-12
		2	201358	P-106-16
		2-1/2	201359	P-106-20
1-1/8 x 1-1/4 NOMINAL				
1.1245	1.2535	7/8	101573	AA-1214-6
		1	101574	AA-1214-3
		1-1/8	101575	AA-1214-2
		1-1/4	101576	AA-1214-1
		1-1/2	101577	AA-1214-8
1.127	1.2525	1-1/4	101578	AA-1250-2
		1-1/2	101579	AA-1250-3
1.128	1.254	1	201360	P-112-8
		1-1/4	201361	P-112-10
		1-1/2	201362	P-112-12
1-1/8 x 1-5/16 NOMINAL				
1.1265	1.3155	1	101580	AA-1317
		1-1/4	101581	AA-1317-1
1.128	1.3155	1	301317	B-1821-8
		1-1/4	301318	B-1821-10
		1-1/2	301319	B-1821-12
		2	301320	B-1821-16

I.D.	O.D.	Length	Item Number	Reference Number
1-1/8 x 1-5/16 NOMINAL (CONT.)				
1.128	1.3165	1	201363	P-113-8
		1-1/4	201364	P-113-10
		1-1/2	201365	P-113-12
		1-3/4	201366	P-113-14
		2	201367	P-113-16
1-1/8 x 1-3/8 NOMINAL				
1.127	1.377	1/2	101582	AA-1332-6
		3/4	101583	AA-1332-1
		1	101584	AA-1332-4
		1-1/4	101585	AA-1332-9
		1-1/2	101586	AA-1332-7
		1-3/4	101587	AA-1332-10
		2	101588	AA-1332
		2-1/4	101589	AA-1332-11
		2-1/2	101590	AA-1332-2
		3	101591	AA-1332-8
		1.128	1.378	3/4
1	301322			B-1822-8
1-1/4	301323			B-1822-10
1-1/2	301324			B-1822-12
1-3/4	301325			B-1822-14
2	301326			B-1822-16
2-1/2	301327			B-1822-20
		3	301328	B-1822-24
1.128	1.379	3/4	201368	P-114-6
		1	201369	P-114-8
		1-1/4	201370	P-114-10
		1-1/2	201371	P-114-12
		1-3/4	201372	P-114-14
		2	201373	P-114-16
		2-1/2	201374	P-114-20
		3	201375	P-114-24
1.129	1.379	1/2	101592	AA-1319-10
		1	101593	AA-1319-3
		1-1/4	101594	AA-1319
		1-1/2	101595	AA-1319-13
		1-3/4	101596	AA-1319-5
		2	101597	AA-1319-1
		2-1/4	101598	AA-1319-12
		2-1/2	101599	AA-1319-2
1-1/8 x 1-1/2 NOMINAL				
1.126	1.503	1	101600	AA-1509-4
		1-1/2	101601	AA-1509-1
		1-3/4	101602	AA-1509-6
		2	101603	AA-1509
		2-1/2	101604	AA-1509-3
1.127	1.5035	1	101605	AA-1502
		1-1/4	101606	AA-1502-2
		1-1/2	101607	AA-1502-3

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
1-1/8 x 1-1/2 NOMINAL (CONT.)				
1.128	1.504	1	201376	P-115-8
		1-1/4	201377	P-115-10
		1-1/2	201378	P-115-12
		1-3/4	201379	P-115-14
		2	201380	P-115-16
		2-1/2	201381	P-115-20
1-3/16 x 1-5/16 NOMINAL				
1.189	1.3155	1	101608	AA-1339-2
		1-1/4	101609	AA-1339
1.189	1.379	1-1/2	101610	AA-1324-1
		1-3/4	101611	AA-1324
1-3/16 x 1-7/16 NOMINAL				
1.1885	1.441	1-1/4	101612	AA-1403-3
		1-1/2	101613	AA-1403-7
		2	101614	AA-1403-10
1.1905	1.441	1-1/4	301329	B-1923-10
		2	301330	B-1923-16
		2-1/2	301331	B-1923-20
		3	301332	B-1923-24
1.1905	1.4415	1-1/4	201382	P-118-10
		1-1/2	201383	P-118-12
		2	201384	P-118-16
		2-1/2	201385	P-118-20
		3	201386	P-118-24
1-3/16 x 1-1/2 NOMINAL				
1.190	1.504	1	101615	AA-1523-2
		1-1/2	101616	AA-1523-5
		2	101617	AA-1523
		2-1/2	101618	AA-1523-3
1.1905	1.503	1	301333	B-1924-8
		1-1/4	301334	B-1924-10
		1-1/2	301335	B-1924-12
		1-3/4	301336	B-1924-14
		2	301337	B-1924-16
		2-1/2	301338	B-1924-20
		3	301339	B-1924-24
1.1905	1.504	1	201387	P-119-8
		1-1/4	201388	P-119-10
		1-1/2	201389	P-119-12
		1-3/4	201390	P-119-14
		2	201391	P-119-16
		2-1/2	201392	P-119-20
		3	201393	P-119-24
1.193	1.504	1	101619	AA-1504-6
		1-1/2	101620	AA-1504-1

I.D.	O.D.	Length	Item Number	Reference Number
1-1/4 x 1-7/16 NOMINAL				
1.2515	1.4405	1-1/4	101621	AA-1407-4
		1-1/2	101622	AA-1407-5
		1-3/4	101623	AA-1407
		2	101624	AA-1407-6
		2-1/2	101625	AA-1407-8
1-1/4 x 1-1/2 NOMINAL				
1.250	1.502	3/4	101626	AA-1517-4
		1-1/4	101627	AA-1517-6
		1-5/8	101628	AA-1517-1
1.252	1.502	1/2	101629	AA-1512-12
		5/8	101630	AA-1512-11
		3/4	101631	AA-1512-14
		7/8	101632	AA-1512-7
		1	101633	AA-1512-15
		1-1/4	101634	AA-1512-16
		1-3/8	101635	AA-1512-3
		1-1/2	101636	AA-1512-2
		1-3/4	101637	AA-1512-17
1-7/8	101638	AA-1512-1		
		2	101639	AA-1512-5
		2-1/2	101640	AA-1512-13
1.253	1.503	1	301340	B-2024-8
		1-1/8	301341	B-2024-9
		1-1/4	301342	B-2024-10
		1-3/8	301343	B-2024-11
		1-1/2	301344	B-2024-12
		1-5/8	301345	B-2024-13
		1-3/4	301346	B-2024-14
		2	301347	B-2024-16
		2-1/4	301348	B-2024-18
		2-1/2	301349	B-2024-20
		3	301350	B-2024-24
1.2535	1.504	1	101641	AA-1528
		1-1/4	101642	AA-1528-3
		1-1/2	101643	AA-1528-4
1.2535	1.504	1/2	201394	P-125-4
		5/8	201395	P-125-5
		3/4	201396	P-125-6
		7/8	201397	P-125-7
		1	201398	P-125-8
		1-1/8	201399	P-125-9
		1-1/4	201400	P-125-10
		1-3/8	201401	P-125-11
		1-1/2	201402	P-125-12
		1-5/8	201403	P-125-13
		1-3/4	201404	P-125-14
		1-7/8	201405	P-125-15
		2	201406	P-125-16
		2-1/4	201407	P-125-18
2-1/2	201408	P-125-20		
3	201409	P-125-24		

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
1-1/4 x 1-1/2 NOMINAL (CONT.)				
1.258	1.504	1	101644	AA-1505-11
		1-1/2	101645	AA-1505-1
1-1/4 x 1-9/16 NOMINAL				
1.252	1.565	1-1/4	101646	AA-1506-12
		1-1/2	101647	AA-1506-6
		1-3/4	101648	AA-1506
		2	101649	AA-1506-7
		2-1/4	101650	AA-1506-8
1-1/4 x 1-5/8 NOMINAL				
1.250	1.627	1-1/2	101651	AA-1602
1.252	1.6275	1	101652	AA-1606-9
		1-1/4	101653	AA-1606
		1-1/2	101654	AA-1606-7
		1-5/8	101655	AA-1606-11
		1-3/4	101656	AA-1606-1
		2	101657	AA-1606-3
		2-1/2	101658	AA-1606-5
		3	101659	AA-1606-4
1.253	1.628	1	301351	B-2026-8
		1-1/4	301352	B-2026-10
		1-1/2	301353	B-2026-12
		1-3/4	301354	B-2026-14
		2	301355	B-2026-16
		2-1/2	301356	B-2026-20
		3	301357	B-2026-24
1.2535	1.630	1	201410	P-126-8
		1-1/4	201411	P-126-10
		1-1/2	201412	P-126-12
		1-3/4	201413	P-126-14
		2	201414	P-126-16
		2-1/2	201415	P-126-20
1.254	1.629	1-1/2	101660	AA-1604
		1-3/4	101661	AA-1604-2
1-1/4 x 1-3/4 NOMINAL				
1.2535	1.755	1-3/4	201417	P-127-14
		2	201418	P-127-16
		2-1/2	201419	P-127-20
		3	201420	P-127-24
1.254	1.753	1-1/2	101662	AA-1715-6
		2	101663	AA-1715-2
		3	101664	AA-1715-3
1-5/16 x 1-1/2 NOMINAL				
1.3155	1.503	1	101665	AA-1526-4
		1-1/4	101666	AA-1526
		1-1/2	101667	AA-1526-2
		2	101668	AA-1526-3

I.D.	O.D.	Length	Item Number	Reference Number	
1-5/16 x 1-1/2 NOMINAL (CONT.)					
1.3155	1.628	1-1/4	301358	B-2126-10	
		1-1/2	301359	B-2126-12	
		2	301360	B-2126-16	
		2-1/2	301361	B-2126-20	
		3	301362	B-2126-24	
1.3155	1.629	1-1/2	101669	AA-1611-5	
		2	101670	AA-1611-2	
		2-1/2	101671	AA-1611	
1.316	1.630	1-1/4	201421	P-131-10	
		1-1/2	201422	P-131-12	
		2	201423	P-131-16	
		2-1/2	201424	P-131-20	
		3	201425	P-131-24	
1-3/8 x 1-9/16 NOMINAL					
1.3745	1.5655	1-1/4	101672	AA-1507-2	
		1-1/2	101673	AA-1507	
1-3/8 x 1-5/8 NOMINAL					
1.376	1.628	1	101674	AA-1608-10	
		1-1/8	101675	AA-1608-1	
		1-1/4	101676	AA-1608-11	
		1-1/2	101677	AA-1608-12	
		1-3/4	101678	AA-1608-13	
		2	101679	AA-1608	
		2-1/2	101680	AA-1608-3	
1.378	1.628	1	301363	B-2226-8	
		1-1/2	301364	B-2226-12	
		2	301365	B-2226-16	
		2-1/2	301366	B-2226-20	
		3	301367	B-2226-24	
1.3785	1.630	1	201426	P-137-8	
		1-1/8	201427	P-137-9	
		1-1/4	201428	P-137-10	
		1-1/2	201429	P-137-12	
		2	201430	P-137-16	
		2-1/2	201431	P-137-20	
		3	201432	P-137-24	
1.379	1.628	1-1/2	101681	AA-1616-3	
		2	101682	AA-1616-5	
		2-1/2	101683	AA-1616-7	
1-3/8 x 1-3/4 NOMINAL					
1.378	1.753	1	301368	B-2228-8	
		1-1/2	301369	B-2228-12	
		2	301370	B-2228-16	
		2-1/2	301371	B-2228-20	
		3	301372	B-2228-24	
	1.5035	1.5035	1	201433	P-138-8
			1-1/2	201434	P-138-12
			2	201435	P-138-16
			2-1/2	201436	P-138-20
			3	201437	P-138-24

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
1-3/8 x 1-3/4 NOMINAL (CONT.)				
1.380	1.753	1-1/2	101684	AA-1708-5
		2	101685	AA-1708-2
		2-1/2	101686	AA-1708
1-7/16 x 1-5/8 NOMINAL				
1.438	1.628	1	101687	AA-1609-2
		1-1/2	101688	AA-1609-4
		2	101689	AA-1609
		2-1/4	101690	AA-1609-6
1.441	1.630	1	201438	P-143-8
		1-1/2	201439	P-143-12
		2	201440	P-143-16
1-7/16 x 1-3/4 NOMINAL				
1.4405	1.753	1	301373	B-2328-8
		1-1/4	301374	B-2328-10
		1-1/2	301375	B-2328-12
		1-3/4	301376	B-2328-14
		2	301377	B-2328-16
		2-1/2	301378	B-2328-20
		3	301379	B-2328-24
1.441	1.755	1	201441	P-144-8
		1-1/4	201442	P-144-10
		1-1/2	201443	P-144-12
		1-3/4	201444	P-144-14
		2	201445	P-144-16
		2-1/2	201446	P-144-20
		3	201447	P-144-24
1.4425	1.7535	7/8	101691	AA-1703-1
		1-1/8	101692	AA-1703-14
		1-1/4	101693	AA-1703-4
		1-1/2	101694	AA-1703-6
		1-3/4	101695	AA-1703-3
		1-7/8	101696	AA-1703
		2	101697	AA-1703-7
2-1/4	101698	AA-1703-10		
2-1/2	101699	AA-1703-5		
1-1/2 x 1-11/16 NOMINAL				
1.507	1.691	3/4	101700	AA-1612-4
		1	101701	AA-1612-1
1-1/2 x 1-3/4 NOMINAL				
1.503	1.753	1	301380	B-2428-8
		1-1/4	301381	B-2428-10
		1-1/2	301382	B-2428-12
		2	301383	B-2428-16
		2-1/2	301384	B-2428-20
		3	301385	B-2428-24

I.D.	O.D.	Length	Item Number	Reference Number
1-1/2 x 1-3/4 NOMINAL (CONT.)				
1.503	1.754	1/2	101702	AA-1704-20
		5/8	101703	AA-1704-21
		3/4	101704	AA-1704-16
		7/8	101705	AA-1704-4
		1	101706	AA-1704-15
		1-1/8	101707	AA-1704-17
		1-1/4	101708	AA-1704-11
		1-3/8	101709	AA-1704-5
		1-1/2	101710	AA-1704
		1-3/4	101711	AA-1704-3
		2	101712	AA-1704-2
		2-1/4	101713	AA-1704-7
		2-1/2	101714	AA-1704-8
3	101715	AA-1704-9		
3-1/2	101716	AA-1704-19		
1.504	1.755	3/4	201448	P-150-6
		5/8	201449	P-150-7
		1	201450	P-150-8
		1-1/4	201451	P-150-10
		1-3/8	201452	P-150-11
		1-1/2	201453	P-150-12
		1-3/4	201454	P-150-14
		2	201455	P-150-16
		2-1/4	201456	P-150-18
		2-1/2	201457	P-150-20
3	201458	P-150-24		
1-1/2 x 1-13/16 NOMINAL				
1.502	1.815	1	101717	AA-1801-1
		1-5/8	101718	AA-1801
1.503	1.816	1-1/2	301386	B-2429-12
		3	301387	B-2429-24
1.504	1.8175	1	201459	P-151-8
		1-1/2	201460	P-151-12
		1-5/8	201461	P-151-13
		3	201462	P-151-24
1-1/2 x 1-7/8 NOMINAL				
1.503	1.878	1-1/2	101719	AA-1807-9
		1-3/4	101720	AA-1807-10
		2	101721	AA-1807
		2-1/2	101722	AA-1807-11
		2-3/4	101723	AA-1807-1
		3	101724	AA-1807-2
		1.503	1.878	1-1/2
2	301389	B-2430-16		
2-1/2	301390	B-2430-20		
3	301391	B-2430-24		
1.503	1.878	1-1/2	201463	P-152-12
		2	201464	P-152-16
		2-1/2	201465	P-152-20
		2-3/4	201466	P-152-22
		3	201467	P-152-24
		3	201467	P-152-24

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
1-1/2 x 2 NOMINAL				
1.503	2.004	1	101725	AA-2007-6
		2	101726	AA-2007-2
		2-1/2	101727	AA-2007-3
		3-1/2	101728	AA-2007-5
1.503	2.004	1	301392	B-2432-8
		1-1/2	301447	B-2432-12
		2	301393	B-2432-16
		2-1/2	301394	B-2432-20
		3	301395	B-2432-24
1.504	2.005	1	201468	P-153-8
		1-1/2	201469	P-153-12
		2	201470	P-153-16
		2-1/2	201471	P-153-20
		3	201472	P-153-24
		3-1/2	201473	P-153-28
1-5/8 x 1-7/8 NOMINAL				
1.627	1.879	1	101729	AA-1803-10
		1-1/4	101730	AA-1803-11
		1-1/2	101731	AA-1803-13
		1-3/4	101732	AA-1803-14
		2	101733	AA-1803-7
		2-1/4	101734	AA-1803-1
		2-3/4	101735	AA-1803-15
		1-1/4	301396	B-2630-10
		1-1/2	301397	B-2630-12
		2	301398	B-2630-16
1.628	1.878	2-1/2	301399	B-2630-20
		3	301400	B-2630-24
		1-1/4	201474	P-162-10
1.629	1.880	1-1/2	201475	P-162-12
		1-3/4	201476	P-162-14
		2	201477	P-162-16
		2-1/4	201478	P-162-18
		2-1/2	201479	P-162-20
		3	201480	P-162-24
		1-5/8 x 2 NOMINAL		
1.6265	2.004	1-1/2	101736	AA-2000-5
		2	101737	AA-2000-1
		2-1/2	101738	AA-2000-3
		3	101739	AA-2000-4
1.628	2.004	1	301401	B-2632-8
		1-1/2	301402	B-2632-12
		2	301403	B-2632-16
		3	301404	B-2632-24
1.629	2.005	1	201481	P-163-8
		1-1/2	201482	P-163-12
		2	201483	P-163-16
		2-1/2	201484	P-163-20
		3	201485	P-163-24

I.D.	O.D.	Length	Item Number	Reference Number
1-11/16 x 2-3/16 NOMINAL				
1.6905	2.191	1-3/4	301405	B-2735-14
		2	301406	B-2735-16
		3	301407	B-2735-24
		4	301408	B-2735-32
1.6905	2.1915	2	101740	AA-2107-1
		4	101741	AA-2107
1.6915	2.1925	1-3/4	201486	P-168-14
		2	201487	P-168-16
		3	201488	P-168-24
		4	201489	P-168-32
1-3/4 x 1-15/16 NOMINAL				
1.7525	1.9415	1-1/4	101742	AA-1904-2
		1-1/2	101743	AA-1904-3
1-3/4 x 2 NOMINAL				
1.753	2.004	1	101744	AA-2001-11
		1-1/2	101745	AA-2001-3
		1-7/8	101746	AA-2001
		2	101747	AA-2001-9
		2-1/2	101748	AA-2001-1
		2-3/4	101749	AA-2001-13
		3	101750	AA-2001-2
1.753	2.004	2	301409	B-2832-16
		2-1/2	301410	B-2832-20
		3	301411	B-2832-24
1.754	2.005	1	201490	P-175-8
		1-1/4	201491	P-175-10
		1-1/2	201492	P-175-12
		1-3/4	201493	P-175-14
		2	201494	P-175-16
		2-1/2	201495	P-175-20
		3	201496	P-175-24
1-3/4 x 2-1/8 NOMINAL				
1.753	2.129	1-1/2	301412	B-2834-12
		2	301413	B-2834-16
		3	301414	B-2834-24
1.754	2.128	1/2	101751	AA-2112-8
		1-1/2	101752	AA-2112-1
		2	101753	AA-2112-2
		2-1/2	101754	AA-2112-3
1.754	2.130	1-1/2	201497	P-176-12
		2	201498	P-176-16
		3	201499	P-176-24
1-3/4 x 2-1/4 NOMINAL				
1.753	2.253	2	101755	AA-2204-2
		2-1/2	101756	AA-2204-3
		3	101757	AA-2204

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number		
1-7/8 x 2-1/4 NOMINAL						
1.878	2.254	3/4	101758	AA-2202-10		
		2	101759	AA-2202		
		2-1/2	101760	AA-2202-1		
		3	101761	AA-2202-2		
1-15/16 x 2-1/8 NOMINAL						
1.940	2.1285	2	101762	AA-2102-3		
		2-1/2	101763	AA-2102-1		
1-15/16 x 2-5/16 NOMINAL						
1.9405	2.316	2	301415	B-3137-16		
		3	301416	B-3137-24		
		4	301417	B-3137-32		
1.9405	2.3165	2	101764	AA-2306-3		
		3	101765	AA-2306-5		
		4	101766	AA-2306		
1.9415	2.3175	2	201500	P-193-16		
		2-1/2	201501	P-193-20		
		3	201502	P-193-24		
		4	201503	P-193-32		
1-15/16 x 2-7/16 NOMINAL						
1.942	2.4415	1-1/2	101767	AA-2403-1		
		2	101768	AA-2403-2		
2 x 2-1/4 NOMINAL						
2.003	2.254	3/4	101769	AA-2203-5		
		1	101770	AA-2203-6		
		1-1/2	101771	AA-2203-7		
		2	101772	AA-2203		
		2-1/2	101773	AA-2203-9		
2.004	2.255	3	101774	AA-2203-10		
		1	201504	P-200-8		
		1-1/2	201505	P-200-12		
		2	201506	P-200-16		
2.004	2.255	2-1/2	201507	P-200-20		
		3	201508	P-200-24		
		2	201508	P-200-24		
2 x 2-3/8 NOMINAL						
2.003	2.379	1-1/8	101775	AA-2304-6		
		1-1/2	101776	AA-2304-7		
		1-3/4	101777	AA-2304		
		2	101778	AA-2304-1		
		2-1/2	101779	AA-2304-2		
		3	101780	AA-2304-3		
		3-1/2	101781	AA-2304-4		
		4	101782	AA-2304-5		
		2.003	2.379	1-3/4	301418	B-3238-14
				2	301419	B-3238-16
2-3/4	301420			B-3238-22		
3	301421			B-3238-24		
4	301422	B-3238-32				

I.D.	O.D.	Length	Item Number	Reference Number
2 x 2-3/8 NOMINAL (CONT.)				
2.004	2.380	1-1/2	201509	P-201-12
		1-3/4	201510	P-201-14
		2	201511	P-201-16
		2-1/2	201512	P-201-20
		2-3/4	201513	P-201-22
		3	201514	P-201-24
		3-1/2	201515	P-201-28
		4	201516	P-201-32
2 x 2-1/2 NOMINAL				
2.003	2.503	1-1/2	101783	AA-2501-1
		2	101784	AA-2501-2
		2-1/2	101785	AA-2501-3
2.004	2.504	3	101786	AA-2501
		1	301423	B-3240-8
2.004	2.504	2	301424	B-3240-16
		3	301425	B-3240-24
2.004	2.505	1	201517	P-202-8
		1-1/2	201518	P-202-12
		2	201519	P-202-16
		2-1/2	201520	P-202-20
		3	201521	P-202-24
		3-1/2	201522	P-202-28
4	201523	P-202-32		
2-3/16 x 2-3/8 NOMINAL				
2.190	2.379	1-1/2	101787	AA-2303-1
2-3/16 x 2-11/16 NOMINAL				
2.1905	2.691	2	301426	B-3543-16
		3	301427	B-3543-24
		4	301428	B-3543-32
2-1/4 x 2-5/8 NOMINAL				
2.254	2.6295	2	101788	AA-2605-3
		3	101789	AA-2605-5
		3-1/2	101790	AA-2605
		4-1/2	101791	AA-2605-2
2.254	2.631	2	201524	P-225-16
		2-1/2	201525	P-225-20
		3	201526	P-225-24
2-1/4 x 2-3/4 NOMINAL				
2.253	2.753	1-1/2	101792	AA-2703-1
		2	101793	AA-2703-2
		3	101794	AA-2703
2.254	2.754	2	301429	B-3644-16
		3	301430	B-3644-24
		4	301431	B-3644-32
2.254	2.756	2	201527	P-226-16
		3	201528	P-226-24
2-3/8 x 2-5/8 NOMINAL				
2.377	2.6295	1-1/4	101795	AA-2602-3
		1-5/8	101796	AA-2602

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Sleeve Type)



I.D.	O.D.	Length	Item Number	Reference Number
2-3/8 x 2-3/4 NOMINAL				
2.379	2.753	2	101797	AA-2701-2
		2-1/2	101798	AA-2701-6
		3	101799	AA-2701
2.379	2.754	2	301432	B-3844-16
		3	301433	B-3844-24
		4	301434	B-3844-32
2.379	2.756	2	201529	P-237-16
		2-1/2	201530	P-237-20
		3	201531	P-237-24
2-7/16 x 3 NOMINAL				
2.4415	3.005	2	301435	B-3948-16
		3	301436	B-3948-24
		4	301437	B-3948-32
2-1/2 x 2-3/4 NOMINAL				
2.505	2.754	2	101800	AA-2702-5
		2-1/2	101801	AA-2702-4
		3	101802	AA-2702-1
2.505	2.756	2	201532	P-250-16
		3	201533	P-250-24
		4	201534	P-250-32
2-1/2 x 2-7/8 NOMINAL				
2.504	2.880	2-1/4	101803	AA-2803-1
		2-1/2	101804	AA-2803-3
		3	101805	AA-2803-2
2.505	2.881	2-1/4	201535	P-251-18
		2-1/2	201536	P-251-20
		3	201537	P-251-24
2-1/2 x 3 NOMINAL				
2.504	3.005	2	101806	AA-3005-7
		2-1/2	101807	AA-3005-4
		3	101808	AA-3005-1
		4	101809	AA-3005
2.504	3.005	2	301438	B-4048-16
		3	301439	B-4048-24
		4	301440	B-4048-32
2.505	3.006	2	201538	P-252-16
		3	201539	P-252-24
		4	201540	P-252-32
2-3/4 x 3 NOMINAL				
2.753	3.005	1-1/2	101810	AA-3006-1
		2-1/2	101811	AA-3006
2-3/4 x 3-1/8 NOMINAL				
2.753	3.129	1-1/4	101812	AA-3100-7
		2-3/4	101813	AA-3100
		4	101814	AA-3100-11

I.D.	O.D.	Length	Item Number	Reference Number
2-3/4 x 3-1/4 NOMINAL				
2.752	3.254	1-1/2	101815	AA-3201-1
		2	101816	AA-3201-4
		3	101817	AA-3201-7
		4	101818	AA-3201
2.755	3.255	2	301441	B-4452-16
		3	301442	B-4452-24
		4	301443	B-4452-32
2.755	3.257	2	201541	P-275-16
		3	201542	P-275-24
		4	201543	P-275-32
3.002	3.255	1-1/4	101820	AA-3200-5
		2	101821	AA-3200
		3	101822	AA-3200-2
3.006	3.257	2	201544	P-300-16
		3	201545	P-300-24
2-15/16 x 3-5/16 NOMINAL				
2.940	3.315	3	101819	AA-3301-3
3 x 3-1/2 NOMINAL				
3.004	3.505	2-1/2	101823	AA-3502-7
		3	101824	AA-3502-8
		4	101825	AA-3502-3
3.004	3.505	2	301444	B-4856-16
		3	301445	B-4856-24
		4	301446	B-4856-32
3.006	3.507	2	201546	P-301-16
		2-1/2	201547	P-301-20
		3	201548	P-301-24
		4	201549	P-301-32
3-1/4 x 3-5/8 NOMINAL				
3.253	3.628	4	101826	AA-3600-5
3-1/2 x 4 NOMINAL				
3.5035	4.004	2	101827	AA-4000-3
		3	101828	AA-4000-5
		3-1/2	101829	AA-4000-6
		4	101830	AA-4000
3.507	4.008	3	201550	P-350-24
		3-1/2	201551	P-350-28
		4	201552	P-350-32
4 x 4-1/2 NOMINAL				
4.0035	4.504	4	101831	AA-4500
		6	101832	AA-4500-2
4.008	4.509	4	201553	P-400-32
4-1/2 x 5-1/4 NOMINAL				
4.504	5.2545	5	101834	AA-5201
5 x 5-3/4 NOMINAL				
5.004	5.755	2	101835	AA-5700-1

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Flange Type)



I.D.	O.D.	FL. Length	FL. O.D.	FL. TH.	Item Number	Reference Number
1/8 x 1/4 NOMINAL						
.126	.252	1/4 3/8	5/16	1/16	102001 102002	FF-207-2 FF-207-3
1/8 x 5/16 NOMINAL						
.127	.315	1/4 3/8	3/8	3/64	302001 302002	FB-25-2 FB-25-3
3/16 x 5/16 NOMINAL						
.187	.313	1/4 3/8	3/8	1/16	102003 102004	FF-313-1 FF-313-2
.189	.314	1/8 1/4 3/8	3/8	3/64	302003 302004 302005	FB-35-1 FB-35-2 FB-35-3
.1895	.314	3/16 1/4 5/16 3/8 1/2	7/16	1/16	102005 102006 102007 102008 102009	FF-303-1 FF-303-3 FF-303-2 FF-303 FF-303-4
.1895	.3155	3/8	7/16	1/16	202001	FL-19-3
3/16 x 3/8 NOMINAL						
.1895	.3765	3/8 1/2	7/16	1/16	102010 102011	FF-307 FF-307-2
1/4 x 3/8 NOMINAL						
.250	.381	3/16 1/4 5/16 3/8 7/16 1/2 9/16 11/16	1/2	1/16	102012 102013 102014 102015 102016 102017 102018 102019	FF-310 FF-310-3 FF-310-4 FF-310-1 FF-310-5 FF-310-2 FF-310-7 FF-310-10
.252	.377	1/4 3/8 1/2 5/8 3/4	1/2	3/64	302006 302007 302008 302009 302010	FB-46-2 FB-46-3 FB-46-4 FB-46-5 FB-46-6
.252	.3775	3/8	15/32	3/64	102023	FF-300
.252	.3775	1/4 3/8 1/2	15/32	1/16	102020 102021 102022	FF-312 FF-312-1 FF-312-2
.252	.378	1/4 3/8 1/2 5/8 3/4	1/2	1/16	202002 202003 202004 202005 202006	FL-26-2 FL-26-3 FL-26-4 FL-26-5 FL-26-6
.253	.377	1/2	1/2	1/16	102024	FF-375-1
1/4 x 7/16 NOMINAL						
.251	.4395	1/2	1/2	1/16	102025	FF-435-1

I.D.	O.D.	FL. Length	FL. O.D.	FL. TH.	Item Number	Reference Number
1/4 x 1/2 NOMINAL						
.252	.503	5/8 3/4	5/8	1/16	102026 102027	FF-565-2 FF-565-3
5/16 x 3/8 NOMINAL						
.314	.377	3/8	1/2	3/64	302011	FB-56-3
5/16 x 7/16 NOMINAL						
.3125	.440	3/8 1/2 7/8	9/16	1/16	102028 102029 102030	FF-411-1 FF-411-2 FF-411-4
.314	.439	3/8 1/2 5/8 3/4 7/8	5/8	3/32	302012 302086 302087 302013 302088 302089	FB-57-3 FB-57-4 FB-57-5 FB-57-6 FB-57-7 FB-57-8
.3145	.4405	3/8 1/2 3/4	9/16	1/16	202007 202008 202009	FL-32-3 FL-32-4 FL-32-6
5/16 x 1/2 NOMINAL						
.3135	.502	3/8	9/16	1/16	102031	FF-501-2
5/16 x 1/2 NOMINAL						
.314	.502	3/8 1/2 5/8	11/16	3/32	302014 302015 302016	FB-58-3 FB-58-4 FB-58-5
.3145	.503	3/8	11/16	1/16	202010	FL-33-3
3/8 x 1/2 NOMINAL						
.3765	.502	1/4 5/16 3/8 1/2	5/8	1/16	102032 102033 102034 102035	FF-520-15 FF-520-9 FF-520-10 FF-520-5
.3765	.503	1/2 5/8	5/8	3/32	102036 102037	FF-512-2 FF-512-3
.377	.502	3/8 13/32 1/2 5/8 3/4 7/8 1 1-1/4	11/16	3/32	302017 302018 302019 302020 302021 302090 302022 302023	FB-68-3 FB-68-3/1-4 FB-68-4 FB-68-5 FB-68-6 FB-68-7 FB-68-8 FB-68-10
.377	.503	1/2 3/4 1	11/16	1/16	202011 202012 202013	FL-38-4 FL-38-6 FL-38-8
.378	.503	1/2	3/4	3/32	102038	FF-519-2
3/8 x 9/16 NOMINAL						
.376	.564	1/2 11/16 13/16	.740	1/16	102039 102040 102041	FF-503-6 FF-503-4 FF-503

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Flange Type)



I.D.	O.D.	FL. Length	FL. O.D.	FL. TH.	Item Number	Reference Number
3/8 x 9/16 NOMINAL (CONT.)						
.377	.5645	1/2	3/4	1/8	302091	FB-69-4
			3/4		302024	FB-69-6
		1-1/4			302025	FB-69-10
.377	.5655	1/2	11/16	1/16	202014	FL-39-4
			3/4		202015	FL-39-6
3/8 x 5/8 NOMINAL						
.376	.627	1/2	7/8	1/16	102042	FF-607-2
			3/4		102043	FF-607-3
		1-1/4			102044	FF-607-1
.377	.627	3/8	7/8	1/8	302092	FB-610-3
			1/2		302026	FB-610-4
			5/8		302093	FB-610-5
			3/4		302027	FB-610-6
		1			302028	FB-610-8
	1-1/4		302029	FB-610-10		
.377	.628	1/2	7/8	1/16	202016	FL-40-4
			3/4		202017	FL-40-6
		1			202018	FL-40-8
		1-1/4			202019	FL-40-10
3/8 x 3/4 NOMINAL						
.377	.753	1/2	1	1/8	302030	FB-612-4
7/16 x 9/16 NOMINAL						
.439	.565	1/2	11/16	1/16	102045	FF-504-3
			5/8		102046	FF-504
			3/4		102047	FF-504-1
.4395	.5655	1/2	11/16	1/16	202020	FL-43-4
			3/4		202021	FL-43-6
7/16 x 5/8 NOMINAL						
.4385	.627	3/4	7/8	1/8	102048	FF-608-3
		1-1/4			102049	FF-608
.439	.628	5/8	7/8	1/8	302031	FB-710-5
			3/4		302094	FB-710-6
		1-1/4			302032	FB-710-10
.4395	.628	3/4	7/8	1/8	202022	FL-44-6
		1-1/4			202023	FL-44-10
1/2 x 5/8 NOMINAL						
.502	.627	5/16	3/4	3/32	102053	FF-636-3
			3/8		102161	FF-636-2
1/2 x 5/8 NOMINAL						
.502	.627	3/16	7/8	1/16	102054	FF-620-9
			1/2		102055	FF-620-1
			9/16		102056	FF-620-5
			5/8		102057	FF-620-7
			11/16		102058	FF-620
			3/4		102059	FF-620-2
			15/16		102060	FF-620-6
			1		102061	FF-620-3
	1-1/8		102062	FF-620-4		

I.D.	O.D.	FL. Length	FL. O.D.	FL. TH.	Item Number	Reference Number
1/2 x 5/8 NOMINAL (CONT.)						
.502	.627	1/2	31/32	3/32	102050	FF-600-5
					102051	FF-600-2
		1-3/4			102052	FF-600
.502	.628	1/2	7/8	1/8	302033	FB-810-4
			5/8		302034	FB-810-5
			3/4		302035	FB-810-6
			7/8		302095	FB-810-7
		1			302036	FB-810-8
		1-1/4			302037	FB-810-10
.502	.628	1-1/2			302038	FB-810-12
		1-3/4			302039	FB-810-14
		3/8	7/8	1/8	202024	FL-50-3
			1/2		202025	FL-50-4
			3/4		202026	FL-50-6
.502	.628	1			202027	FL-50-8
		1-1/4			202028	FL-50-10
		1-1/2			202029	FL-50-12
1/2 x 11/16 NOMINAL						
.502	.690	1/2	15/16	1/8	302040	FB-811-4
			5/8		302096	FB-811-5
			3/4		302041	FB-811-6
.502	.6905	1/2	7/8	1/8	202030	FL-51-4
			3/4		202031	FL-51-6
.502	.691	5/16	13/16	1/16	102066	FF-609-1
			1/2		102067	FF-609-3
			3/4		102068	FF-609-4
			13/16		102069	FF-609
		1				
.502	.691	1/2	31/32	3/32	102063	FF-604-2
			3/4		102064	FF-604-1
		13/16			102065	FF-604
1/2 x 3/4 NOMINAL						
.502	.753	1/2	15/16	1/8	102070	FF-707-5
			3/4		102071	FF-707-2
		1			102072	FF-707-3
.502	.753	1/2	1	1/8	302042	FB-812-4
			5/8		302097	FB-812-5
			3/4		302043	FB-812-6
			7/8		302044	FB-812-7
		1			302045	FB-812-8
		1-1/4			302046	FB-812-10
.502	.753	1-1/2			302047	FB-812-12
		1/2	1	1/8	202032	FL-52-4
			3/4		202033	FL-52-6
		1			202034	FL-52-8
	1-1/4		202035	FL-52-10		
.503	.753	3/4	15/16	1/8	102073	FF-710
.505	.753	3/8	1	1/8	102074	FF-723-5
			1/2		102075	FF-723-1
			5/8		102076	FF-723

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Flange Type)



I.D.	O.D.	Length	FL. O.D.	FL. TH.	Item Number	Reference Number
9/16 x 3/4 NOMINAL						
.565	.753	1/2	1	1/8	302098	FB-912-4
		3/4			302099	FB-912-6
		1			302048	FB-912-8
5/8 x 3/4 NOMINAL						
.626	.753	1/2	1	1/8	302049	FB-1012-4
		5/8			302050	FB-1012-5
		3/4			302051	FB-1012-6
		1			302052	FB-1012-8
		1-1/4			302053	FB-1012-10
.6265	.7525	5/8	1	3/32	102077	FF-703-3
		3/4			102078	FF-703-7
		1			102079	FF-703-1
		1-1/8			102080	FF-703
		1-1/4			102081	FF-703-6
.627	.753	5/8	1	1/8	202036	FL-62-5
		3/4			202037	FL-62-6
		1			202038	FL-62-8
		1-1/8			202039	FL-62-9
.6275	.7525	1/2	7/8	1/16	102082	FF-718-1
		1			102083	FF-718-3
		1-1/8			102084	FF-718-6
5/8 x 13/16 NOMINAL						
.625	.815	1	1	1/8	102085	FF-823-3
		1-1/4			102086	FF-823
.626	.815	1/2	1	1/8	102087	FF-842-1
		3/4			102088	FF-842-2
		1			102089	FF-842-3
.627	.815	5/8	1-1/16	5/32	302100	FB-1013-5
		3/4			302054	FB-1013-6
		1			302055	FB-1013-8
		1-1/4			302056	FB-1013-10
		1-7/16			302057	FB-1013-11.5
		1-1/2			302058	FB-1013-12
		2			302059	FB-1013-16
.627	.8165	3/4	1	1/8	202040	FL-63-6
		1			202041	FL-63-8
		1-1/4			202042	FL-63-10
		1-1/2			202043	FL-63-12
.628	.816	3/4	1-1/4	1/8	102090	FF-806-1
		1-7/16			102091	FF-806
.6295	.8155	1/2	1	1/8	102092	FF-805-2
		3/4			102093	FF-805
		1			102094	FF-805-3
5/8 x 7/8 NOMINAL						
.627	.877	5/8	1	1/8	102095	FF-843-4
		3/4			102096	FF-843
		1			102097	FF-843-2
		1-1/4			102098	FF-843-3

I.D.	O.D.	Length	FL. O.D.	FL. TH.	Item Number	Reference Number
5/8 x 7/8 NOMINAL (CONT.)						
.627	.878	5/8	1-1/8	5/32	302101	FB-1014-5
		3/4			302060	FB-1014-6
		1			302061	FB-1014-8
		1-3/4			302062	FB-1014-14
.627	.879	1/2	1-1/8	1/8	202044	FL-64-4
		3/4			202045	FL-64-6
		1			202046	FL-64-8
		1-1/4			202047	FL-64-10
5/8 x 1 NOMINAL						
.627	1.003	3/4	1-1/4	5/32	302102	FB-1016-6
		1			302063	FB-1016-8
.627	1.004	1	1-1/4	3/16	202048	FB-66-8
3/4 x 7/8 NOMINAL						
.751	.877	1/2	1	1/16	102099	FF-838-1
		1			102100	FF-838-3
.752	.878	3/4	1-1/8	5/32	302064	FB-1214-6
		1			302065	FB-1214-8
		1-1/4			302103	FB-1214-10
.752	.879	1/2	1-1/8	1/8	202049	FL-75-4
		3/4			202050	FL-75-6
3/4 x 15/16 NOMINAL						
.7505	.941	3/4	1-1/8	3/32	102101	FF-911-3
		1			102102	FF-911-4
.752	.940	1	1-3/16	5/32	302066	FB-1215-8
		1-1/4			302104	FB-1215-10
		1-1/2			302067	FB-1215-12
.752	.9415	3/4	1-1/4	1/8	202051	FL-76-6
		1			202052	FL-76-8
		1-1/8			202053	FL-76-9
		1-1/4			202054	FL-76-10
		1-1/2			202055	FL-76-12
.753	.938	9/16	1-5/16	1/8	102103	FF-901-4
		3/4			102104	FF-901-6
		1-1/4			102105	FF-901-8
		1-9/16			102106	FF-901
.753	.9405	1-1/8	1.175	1/8	102107	FF-905
3/4 x 1 NOMINAL						
.7505	1.002	1/2	1-7/16	1/8	102108	FF-1011-2
		5/8			102109	FF-1011
		1			102110	FF-1011-4
		1-1/8			102111	FF-1011-1
.751	1.002	3/4	1-1/2	1/8	102112	FF-1013-2
		1			102113	FF-1013
		1-1/4			102114	FF-1013-3
		1-1/2			102115	FF-1013-4
.752	1.002	3/4	1-5/16	1/8	102116	FF-1014-2
		1			102117	FF-1014

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Flange Type)



I.D.	O.D.	FL. Length	FL. O.D.	FL. TH.	Item Number	Reference Number
3/4 x 1 NOMINAL (CONT.)						
.752	1.003	5/8	1-1/4	5/32	302105	FB-1216-5
		3/4			302068	FB-1216-6
		1			302069	FB-1216-8
		1-1/4			302070	FB-1216-10
		1-1/2			302071	FB-1216-12
		2			302072	FB-1216-16
.752	1.004	5/8	1-1/4	3/16	202056	FL-77-5
		3/4			202057	FL-77-6
		1			202058	FL-77-8
		1-1/8			202059	FL-77-9
		1-1/4			202060	FL-77-10
		1-1/2			202061	FL-77-12
.753	1.003	1/2	1-1/8	1/8	102118	FF-1015-1
		3/4			102119	FF-1015-2
		1			102120	FF-1015
3/4 x 1-1/16 NOMINAL						
.752	1.0655	1-3/16	1-3/16	1/8	102121	FF-1010
7/8 x 1 NOMINAL						
.8765	1.003	5/8	1-1/4	1/8	102122	FF-1001-2
		3/4			102123	FF-1001-1
		1			102124	FF-1001
.877	1.003	3/4	1-1/4	5/32	302073	FB-1416-6
		1			302106	FB-1416-8
		1-1/4			302074	FB-1416-10
.877	1.004	1/2	1-1/4	3/16	202062	FL-87-4
		3/4			202063	FL-87-6
		1			202064	FL-87-8
7/8 x 1-1/8 NOMINAL						
.877	1.128	1	1-3/8	5/32	302075	FB-1418-8
		1-1/4			302107	FB-1418-10
		1-1/2			302076	FB-1418-12
.877	1.128	5/8	1-1/2	1/8	102125	FF-1102-6
		1			102126	FF-1102-2
		1-1/4			102127	FF-1102-3
		1-3/4			102128	FF-1102
.877	1.129	3/4	1-1/2	1/8	202065	FL-89-6
		1			202066	FL-89-8
		1-1/4			202067	FL-89-10
		1-1/2			202068	FL-89-12
		1-3/4			202069	FL-89-14
1 x 1-1/4 NOMINAL						
1.001	1.252	3/4	1-1/2	1/8	102129	FF-1213-1
		1-1/2			102130	FF-1213-4
1.001	1.253	3/4	1-7/8	1/8	102131	FF-1202-4
		1			102132	FF-1202-3
		1-1/4			102133	FF-1202

I.D.	O.D.	FL. Length	FL. O.D.	FL. TH.	Item Number	Reference Number
1 x 1-1/4 NOMINAL (CONT.)						
1.002	1.252	3/4	1-5/8	1/8	102134	FF-1207-5
		1-1/4			102135	FF-1207-7
		1-1/2			102136	FF-1207-3
		1-3/4			102137	FF-1207
1.002	1.253	3/4	1-1/2	3/16	302077	FB-1620-6
		1			302078	FB-1620-8
		1-1/4			302079	FB-1620-10
		1-1/2			302080	FB-1620-12
		2			302081	FB-1620-16
1.003	1.254	3/4	1-1/2	1/8	202070	FL-102-6
		1			202071	FL-102-8
		1-1/4			202072	FL-102-10
		1-1/2			202073	FL-102-12
1 x 1-5/16 NOMINAL						
1.001	1.316	1-1/4	1-3/4	7/32	102138	FF-1302
1.0015	1.3155	1-1/2	1-7/8	1/8	102140	FF-1301
1 x 1-3/8 NOMINAL						
1.000	1.3785	1-3/4	1-3/4	3/16	102141	FF-1304
		2			102142	FF-1304-1
1.002	1.378	1	1-5/8	3/16	302082	FB-1622-8
		1-1/2			302108	FB-1622-12
		1-3/4			302083	FB-1622-14
1.003	1.379	3/4	1-5/8	3/16	202074	FL-104-6
		1			202075	FL-104-8
		1-1/2			202076	FL-104-12
		1-3/4			202077	FL-104-14
		2			202078	FL-104-16
1-1/8 x 1-3/8 NOMINAL						
1.127	1.377	3/4	1-3/4	1/8	102143	FF-1314-1
		1			102144	FF-1314-2
		1-1/4			102145	FF-1314-3
1-1/4 x 1-1/2 NOMINAL						
1.2515	1.503	1/2	1-11/16	1/8	102146	FF-1505-5
		1-1/4			102147	FF-1505
1.252	1.503	1	1-3/4	3/16	302109	FB-2024-8
		1-1/4			302084	FB-2024-10
		1-1/2			302110	FB-2024-12
1.252	1.503	1-1/2	2	3/32	102148	FF-1506-4
		1-3/4			102149	FF-1506-5
1.2535	1.504	1	1-3/4	3/16	202079	FL-125-8
		1-1/4			202080	FL-125-10
		1-1/2			202081	FL-125-12
		1-3/4			202082	FL-125-14
1-3/8 x 1-5/8 NOMINAL						
1.377	1.628	3/4	2	1/8	102150	FF-1618
		1			102151	FF-1618-1

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Flange Type)



I.D.	O.D.	FL. Length	FL. O.D.	TH.	Item Number	Reference Number
1-1/2 x 1-3/4 NOMINAL						
1.503	1.752	1-1/2	2	3/32	102152	FF-1704-4
1.503	1.754	1-1/2	2-1/16	3/16	302085	FB-2428-12
1.504	1.755	1-1/2	2	3/16	202083	FL-150-12
1-5/8 x 2 NOMINAL						
1.6265	2.004	2	2-1/4	3/16	102153	FF-2000
1.629	2.005	2	2-1/4	3/16	202084	FL-163-16
1-3/4 x 2-1/4 NOMINAL						
1.753	2.254	2-1/2	3	1/4	102154	FF-2204-3
1.754	2.255	2-1/2	3	1/4	202085	FL-177-20

I.D.	O.D.	FL. Length	FL. O.D.	TH.	Item Number	Reference Number
2 x 2-1/4 NOMINAL						
2.003	2.254	3/4	2-1/2	1/8	102155	FF-2203-2
		1			102156	FF-2203-3
		1-1/4			102157	FF-2203-4
2.004	2.255	2	2-1/2	1/8	202086	FL-200-16
2 x 2-1/2 NOMINAL						
2.002	2.501	2-3/8	3	3/8	102158	FF-2501
2-3/4 x 3-1/4 NOMINAL						
2.752	3.250	1-1/2	4	3/16	102159	FF-3200-4
3 x 3-1/2 NOMINAL						
3.002	3.502	2-3/8	4	3/8	102160	FF-3500

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Thrust Bearings)



I.D.	O.D.	Length	Item Number	Reference Number
1/4 x 7/16 NOMINAL				
.255	.4375	1/16	102401	TT-400
1/4 x 1/2 NOMINAL				
.255	.500	1/16	102402	TT-504
1/4 x 5/8 NOMINAL				
.252	.628	1/16	202401	TW-25
.255	.625	1/16	102403	TT-601
.255	.625	1/16	302401	TB-410
5/16 x 5/8 NOMINAL				
.3145	.625	1/16	102404	TT-602
5/16 x 3/4 NOMINAL				
.3145	.753	1/16	202402	TW-31
.315	.750	1/16	102405	TT-709-1
.315	.750	1/16	302402	TB-512
3/8 x 5/8 NOMINAL				
.385	.625	1/16	102406	TT-604
3/8 x 3/4 NOMINAL				
.377	.753	1/16	202403	TW-37
.3775	.750	1/16	102407	TT-710-1
		1/8	102408	TT-710-2
.390	.750	1/32	102409	TT-703
.390	.750	1/32	302403	TB-612

I.D.	O.D.	Length	Item Number	Reference Number
7/16 x 3/4 NOMINAL				
.4385	.750	1/16	102410	TT-705-1
.439	.750	1/16	302418	TB-712
.4395	.753	1/16	202404	TW-43
1/2 x 3/4 NOMINAL				
.502	.753	1/16	202405	TW-50
.507	.750	1/16	102411	TT-706
.507	.750	1/16	302404	TB-812
1/2 x 7/8 NOMINAL				
.505	.875	3/16	102412	TT-801
.505	.875	3/16	302405	TB-814
1/2 x 1 NOMINAL				
.502	1.004	1/16	202406	TW-51
		1/8	202407	TW-52
.510	1.000	1/16	102413	TT-1001
		3/32	102414	TT-1001-2
		1/8	102415	TT-1001-1

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Thrust Bearings)



I.D.	O.D.	Length	Item Number	Reference Number
1/2 x 1 NOMINAL (CONT.)				
.510	1.000	1/16	302406	TB-816
9/16 x 1-1/4 NOMINAL				
.5645	1.254	1/8	202408	TW-56
.565	1.250	1/16	102416	TT-1200-1
		1/8	102417	TT-1200
.565	1.250	1/8	302407	TB-920
5/8 x 1 NOMINAL				
.627	1.004	1/16	202409	TW-62
		1/8	202410	TW-63
.628	1.000	1/16	102418	TT-1002-1
		1/8	102419	TT-1002
.628	1.000	3/32	302408	TB-1016
5/8 x 1-3/16 NOMINAL				
.627	1.187	3/32	302409	TB-1019
.627	1.1875	1/16	102420	TT-1102-1
		3/32	102421	TT-1102
		1/8	102422	TT-1102-2
.627	1.1915	3/32	202411	TW-64
5/8 x 1-1/4 NOMINAL				
.627	1.254	1/8	202412	TW-65
.628	1.250	1/16	102423	TT-1204
		1/8	102424	TT-1204-1
.6285	1.250	1/8	302419	TB-1020
5/8 x 1-1/2 NOMINAL				
.6265	1.500	1/8	302420	TB-1024
.656	1.500	1/16	102425	TT-1508-1
		1/8	102426	TT-1508-2
3/4 x 1-1/4 NOMINAL				
.7515	1.250	1/8	302421	TB-1216
.752	1.254	1/16	202413	TW-75
		1/8	202414	TW-76
.753	1.250	1/16	102427	TT-1205
		1/8	102428	TT-1205-1
3/4 x 1-3/8 NOMINAL				
.752	1.375	1/8	302422	TB-1218
.752	1.379	1/8	202415	TW-77
.753	1.375	1/16	102429	TT-1303-1
		1/8	102430	TT-1303-2
		1/4	102431	TT-1303-4

I.D.	O.D.	Length	Item Number	Reference Number
3/4 x 1-9/16 NOMINAL				
.752	1.5675	3/32	202416	TW-78
.765	1.562	3/32	302410	TB-1225
.765	1.5625	3/32	102432	TT-1501-1
3/4 x 1-3/4 NOMINAL				
.752	1.755	1/8	202417	TW-79
.765	1.750	1/8	102433	TT-1701
.765	1.750	1/8	302411	TB-1228
7/8 x 1-1/2 NOMINAL				
.877	1.504	1/8	202418	TW-87
.890	1.500	1/8	302412	TB-1424
.8905	1.500	1/16	102434	TT-1503-2
		1/8	102435	TT-1503
7/8 x 2 NOMINAL				
.880	2.000	1/8	102436	TT-2007
7/8 x 2-1/8 NOMINAL				
.890	2.125	1/8	302413	TB-1434
.8905	2.125	1/8	102437	TT-2101-1
1 x 1-1/2 NOMINAL				
1.003	1.504	1/16	102438	TT-1502-2
		1/8	102439	TT-1502
		3/16	102440	TT-1502-1
1.003	1.504	1/8	302414	TB-1624
1.003	1.504	1/8	202419	TW-100
1 x 1-5/8 NOMINAL				
1.003	1.630	1/8	202420	TW-101
1.0155	1.625	1/16	102441	TT-1603-3
		1/8	102442	TT-1603
		1/4	102443	TT-1603-4
1 x 1-3/4 NOMINAL				
1.012	1.750	1/16	102444	TT-1709-1
		1/8	102445	TT-1709
1 x 2 NOMINAL				
1.003	2.005	1/8	202421	TW-102
1.106	2.000	1/8	102446	TT-2001
		3/16	102447	TT-2001-1
1.016	2.000	1/8	302415	TB-1632
1 x 2-7/8 NOMINAL				
1.0155	2.875	1/8	102448	TT-2800

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Thrust Bearings)



I.D.	O.D.	Length	Item Number	Reference Number
1-1/16 x 2-3/8 NOMINAL				
1.0625	2.375	1/16	102449	TT-2301-4
		1/8	102450	TT-2301-3
1-1/8 x 1-7/8 NOMINAL				
1.140	1.875	1/8	102451	TT-1800-1
1-1/4 x 1-11/16 NOMINAL				
1.253	1.690	1/8	102452	TT-1602
1.2535	1.6925	1/8	202422	TW-125
1-1/4 x 1-3/4 NOMINAL				
1.253	1.750	1/8	302416	TB-2028
1-1/4 x 2 NOMINAL				
1.2535	2.005	1/8	202423	TW-126
1.265	2.000	1/16	102453	TT-2006
			102454	TT-2006-1
1-1/4 x 2-3/8 NOMINAL				
1.265	1.375	1/16	102455	TT-2304-1
		1/8	102456	TT-2304-2
1-1/4 x 3-5/16 NOMINAL				
1.255	3.312	1/16	102457	TT-3301
		1/8	102458	TT-3301-1
1-3/8 x 1-15/16 NOMINAL				
1.379	1.940	1/8	102459	TT-1900
1-1/2 x 2 NOMINAL				
1.503	2.000	1/8	102460	TT-2008
1-1/2 x 2-1/2 NOMINAL				
1.504	2.505	1/8	202424	TW-150

I.D.	O.D.	Length	Item Number	Reference Number
1-1/2 x 3-1/2 NOMINAL				
1.504	3.507	3/16	202425	TW-151
1.510	3.500	3/16	102461	TT-3500-1
1.510	3.500	3/16	302417	TB-2456
1-9/16 x 2-7/16 NOMINAL				
1.578	2.4375	1/8	102462	TT-2402
1-3/4 x 2-7/16 NOMINAL				
1.755	2.440	1/8	102463	TT-2400-1
1-3/4 x 2-5/8 NOMINAL				
1.754	2.631	1/8	202426	TW-175
1.765	2.625	1/8	102464	TT-2601
1-15/16 x 2-5/8 NOMINAL				
1.953	2.625	1/8	102465	TT-2600
2 x 3 NOMINAL				
2.004	3.006	1/8	202427	TW-200
		1/4	202428	TW-201
2.010	3.000	1/8	102467	TT-3001-3
		3/16	102466	TT-3001
		1/4	102468	TT-3001-1
2 x 3-5/8 NOMINAL				
2.031	3.625	3/16	102469	TT-3600
2-1/16 x 4 NOMINAL				
2.062	4.000	1/8	102470	TT-4002-1
		1/4	102471	TT-4002
2-1/2 x 3-1/4 NOMINAL				
2.502	3.250	1/8	102472	TT-3200
2-3/4 x 3-7/8 NOMINAL				
2.766	3.875	1/4	102473	TT-3800

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Cored Bar Stock)



I.D.	O.D.	Item Number	Reference Number
1/2	1	102601	CC-1000-2
	1-1/8	102602	CC-1103
	1-1/4	102603	CC-1203
	1-1/2	102604	CC-1502
	2	102605	CC-2005

I.D.	O.D.	Item Number	Reference Number
5/8	1	102606	CC-1001
	1-1/8	102607	CC-1101-1
	1-1/4	102608	CC-1200-1
	1-3/8	102609	CC-1302
	1-1/2	102610	CC-1503
	1-3/4	102611	CC-1703
	2	102612	CC-2006

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Cored Bar Stock)



I.D.	O.D.	Item Number	Reference Number
3/4	1-1/4	102613	CC-1201-1
	1-1/2	102614	CC-1500-1
	1-3/4	102615	CC-1702
	2	102616	CC-2001
	2-1/4	102617	CC-2206
	2-1/2	102618	CC-2504
	2-3/4	102619	CC-2704
7/8	1-3/8	102620	CC-1301
	1-1/2	102621	CC-1504
	2	102622	CC-2007
	2-1/4	102623	CC-2207
1	1-1/2	102624	CC-1501
	1-5/8	102625	CC-1600-1
	1-3/4	102626	CC-1700-2
	2	102627	CC-2002
	2-1/4	102628	CC-2202-2
	2-1/2	102629	CC-2501
	3	102630	CC-3001
	3-1/2	102631	CC-3504
	4	102632	CC-4004
	1-1/8	2-1/8	102633
1-1/4	1-3/4	102634	CC-1701-3
	2	102635	CC-2000-1
	2-1/4	102636	CC-2203
	2-1/2	102637	CC-2502
	3	102638	CC-3003
	3-1/2	102639	CC-3505
	4	102640	CC-4005
1-3/8	2	102641	CC-2003
	2-3/4	102642	CC-2702
1-1/2	2	102643	CC-2004
	2-1/4	102644	CC-2200-1
	2-1/2	102645	CC-2503
	2-3/4	102646	CC-2701
	3	102647	CC-3002
	3-1/2	102648	CC-3502
	4	102649	CC-4007
1-3/4	2-1/4	102650	CC-2201-3
	2-1/2	102651	CC-2500-1
	2-5/8	102652	CC-2604
	2-3/4	102653	CC-2703
	3	102654	CC-3005
	3-1/2	102655	CC-3503
	4-1/4	102656	CC-4202
4-1/2	102657	CC-4502	
2	2-3/4	102658	CC-2700-1
	3	102659	CC-3000
	3-1/4	102660	CC-3201-2
	4	102661	CC-4003
	4-1/2	102662	CC-4501
	5	102663	CC-5000
5-1/2	102664	CC-5500	

I.D.	O.D.	Item Number	Reference Number
2-1/4	3	102665	CC-3006
	3-1/4	102666	CC-3202-1
	3-1/2	102667	CC-3500-1
	3-3/4	102668	CC-3703
	4	102669	CC-4008
4-1/2	4-1/2	102670	CC-4503
	3	102671	CC-3007
2-3/8	3-1/2	102672	CC-3507
	4	102673	CC-4009
	4-1/2	102674	CC-4504
2-1/2	3-1/2	102675	CC-3501
	3-3/4	102676	CC-3702
	4	102677	CC-4010
	4-1/4	102678	CC-4203
	4-1/2	102679	CC-4505
5	102680	CC-5001	
2-3/4	3-3/4	102681	CC-3700-1
3	3-3/4	102682	CC-3701-1
	4	102683	CC-4001
	4-1/2	102684	CC-4506
	5	102685	CC-5002
	6	102686	CC-6000
9	102687	CC-9001	
3-1/4	4-1/4	102688	CC-4200-1
3-1/2	4-3/4	102689	CC-4700-2
	5	102690	CC-5003
	6	102691	CC-6002
	5	102692	CC-5004
3-3/4	5	102692	CC-5004
	5-1/2	102693	CC-5001
	6	102694	CC-6001
	7	102695	CC-7001
8	8	102696	CC-8000
	4-1/2	6	102697
5	7	102698	CC-7000
6	8	102699	CC-8001
	9	102700	CC-9000
7	9	102701	CC-9002-1
7-3/4	10-3/8	102702	CC-10301

Will finish to dimensions shown.
All 6-1/2 inch lengths.

Continued on next page

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Solid Bar Stock)



I.D.	O.D.	Item Number	Reference Number
SOLID			
	1/4*	102801	BB-200
	3/8†	102802	BB-302
	1/2	102803	BB-500
	5/8	102804	BB-600-1
	3/4	102805	BB-700-1
	7/8	102806	BB-800-1
	1	102807	BB-1000-2
	1-1/8	102808	BB-1100
	1-1/4	102809	BB-1200-1
	1-3/8	102810	BB-1300
	1-1/2	102811	BB-1500-2
	1-5/8	102812	BB-1600
	1-3/4	102813	BB-1700-1
	2	102814	BB-2000-1
	2-1/4	102815	BB-2200
	2-1/2	102816	BB-2500-1
	2-3/4	102817	BB-2700-1
	3	102818	BB-3000-1
	3-1/4	102819	BB-3200-2
	3-1/2	102820	BB-3500-1

I.D.	O.D.	Item Number	Reference Number
	4	102821	BB-4000-1
	4-1/2	102822	BB-4500
	5	102823	BB-5000
	5-1/2	102824	BB-5500
	6	102825	BB-6000
	7	102826	BB-7000
	8	102827	BB-8000
	12-7/8	102829	BB-12800

I.D. and O.D. will finish to dimensions shown.

Standard length 6-1/2 inches

*2 inches

†3 inches

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Plate & Strip Stock)



Width	Length	Thickness ±.005	Item Number	Reference Number
Plate				
1/2	2-1/2	1/4	102901	PP-2500
1-1/8	3-1/8	3/16	102902	PP-3100*
2	8-1/8	1/4	102903	PP-8100-1
		1/2	102904	PP-8100
3	12	1/4	102905	PP-12100
		1/2	102906	PP-12100-1
		3/4	102907	PP-12100-2
		1	102908	PP-12100-3
5	6	1/8	102909	PP-6000
		3/16	102910	PP-6000-1
		1/4	102911	PP-6000-2
		3/8	102912	PP-6000-4
		1/2	102913	PP-6000-5
		5/8	102914	PP-6000-6
		3/4	102915	PP-6000-7
		1	102916	PP-6000-8
5	8	1/8	102917	PP-8000-7*
		3/16	102918	PP-8000*
		1/4	102919	PP-8000-1
		1/2	102920	PP-8000-4
		3/4	102921	PP-8000-5
		1	102922	PP-8000-6*

Width	Length	Thickness ±.005	Item Number	Reference Number
6	12	1/8	102923	PP-12000-6
		3/16	102924	PP-12000-7
		1/4	102925	PP-12000
		3/8	102926	PP-12000-1
		1/2	102927	PP-12000-2
		5/8	102928	PP-12000-3
		3/4	102929	PP-12000-4*
		1	102930	PP-12000-5

Width and length will finish to dimensions shown.

*This part will no longer be available as a standard part when current stocks are depleted.

Oil Impregnated Powder Metal Bronze Bearings Stock Sizes (Discs – Circular Bearing Plates)



I.D.	O.D.	Thickness ±.005	Item Number	Reference Number
Solid				
3	3	1/4	103001	DD-3000
3	4	3/8	103002	DD-3000-1*
4	4	1/4	103003	DD-4000
5-5/8	1/4	103004	DD-5602-1*	
6	5/16	103005	DD-6000	
7	5/16	103006	DD-7001	
8	5/16	103007	DD-8000	
8	3/8	103008	DD-8000-3	
12-7/8	5/16	103009	DD-12800	
18	3/8	103010	DD-18000-1	

I.D.	O.D.	Thickness ±.005	Item Number	Reference Number
1	3	1/4	103101	CD-3001
	4	1/4	103102	CD-4001
2	4	1/4	103103	CD-4002
	5-1/2	1/4	103104	CD-5500
2-1/4	4-1/2	1/4	103105	CD-4502
	7	1/4	103106	CD-7000-2
3	9	5/16	103107	CD-9001
4	6	5/16	103108	CD-6003

I.D. and O.D. will finish to dimensions shown.

†2-1/2" lengths. †6-1/2" lengths.

*This part will no longer be available as a standard part when current stocks are depleted.

Super Sintered Iron, SAE 863 Powder Metal Bearings Stock Sizes Iron Base (Bar Stock 5" Lengths)



I.D.	O.D.	Item Number	Reference Number
Cored			
1/2	1	103301	SSC-1000
	1-7/16	103302	SSC-1402
	1-15/16	103303	SSC-1905*
3/4	1-3/16	103304	SSC-1102
	1-9/16	103305	SSC-1500
	1-15/16	103306	SSC-1900
	2-5/16	103307	SSC-2300*
	2-5/8	103308	SSC-2604*
1	1-7/16	103309	SSC-1401*
	1-11/16	103310	SSC-1601*
	2-3/16	103311	SSC-2100
1-1/4	1-11/16	103312	SSC-1602
	2-3/16	103313	SSC-2103
	2-7/8	103314	SSC-2803
	3-7/8	103315	SSC-3803*
1-1/2	1-15/16	103316	SSC-1904
	2-5/8	103317	SSC-2602
	3	103318	SSC-3003*
	3-7/8	103319	SSC-3805
1-3/4	2-1/2	103320	SSC-2504
	3	103321	SSC-3004
	4-3/8	103322	SSC-4301*
2	2-5/8	103323	SSC-2600
	3	103324	SSC-3005
	3-7/8	103325	SSC-3800*
	5-3/8	103326	SSC-5300*
2-1/2	3-3/8	103327	SSC-3301
	4-1/8	103328	SSC-4102
	4-7/8	103329	SSC-4801*

I.D.	O.D.	Item Number	Reference Number
3	3-7/8	103330	SSC-3801
	4-7/8	103331	SSC-4802*
	5-7/8	103332	SSC-5800
4	5-1/8	103333	SSC-5101
	5-7/8	103334	SSC-5801
	7-7/8	103335	SSC-7800
6	8-7/8	103336	SSC-8800
Solid			
	3/8†	103401	SSS-300
	1/2†	103402	SSS-500
	5/8	103403	SSS-600
	3/4	103404	SSS-700
	7/8	103405	SSS-800
1	1	103406	SSS-1000
	1-3/16	103407	SSS-1100
	1-5/16	103408	SSS-1300
	1-7/16	103409	SSS-1400*
	1-9/16	103410	SSS-1500
	1-13/16	103411	SSS-1800
	2-1/16	103412	SSS-2000
	2-7/8	103413	SSS-2800
	3-5/8	103414	SSS-3600*
	4-1/2	103415	SSS-4500*
6-3/4	103416	SSS-6700*	

I.D. and O.D. will finish to dimensions shown.

†2-1/2" lengths. †6-1/2" lengths.

*This part will no longer be available as a standard part when current stocks are depleted.

CAST BRONZE BEARINGS



Cast Bronze Sleeve Bearings

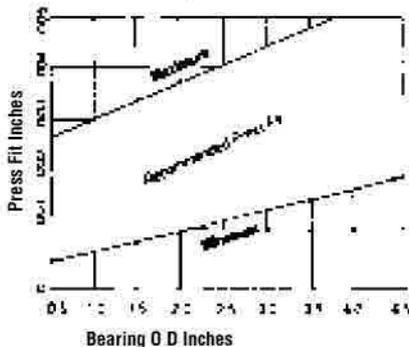


Typical Properties

Chemical	
Composition83% Cu, 7% Sn, 7% Pb, 3% Zn
Tensile Strength44,000 PSI
Yield Strength27,000 PSI
Elongation, in 2"16%
Brinell Hardness72
Equivalent SpecificationsSAE 660:
A.S.T.M. B144-52; Mil-B-16261 (2), Grade VI	
Fed: QQ-L-225, Comp 12.	
QQ-B-691b(1). Comp.12	

Press Fit

Less than normal press fit proves satisfactory: (1) if the bearing is long and the wall is not exceptionally thin, and (2) if the bearing is also carrying a moderate load exerted only in one direction.



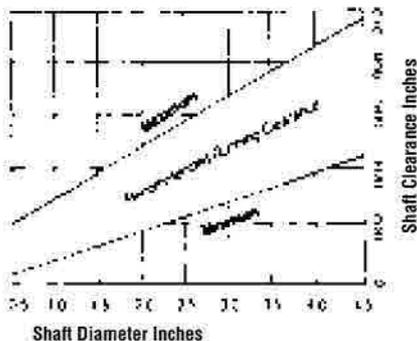
Tolerances

From Nominal Size

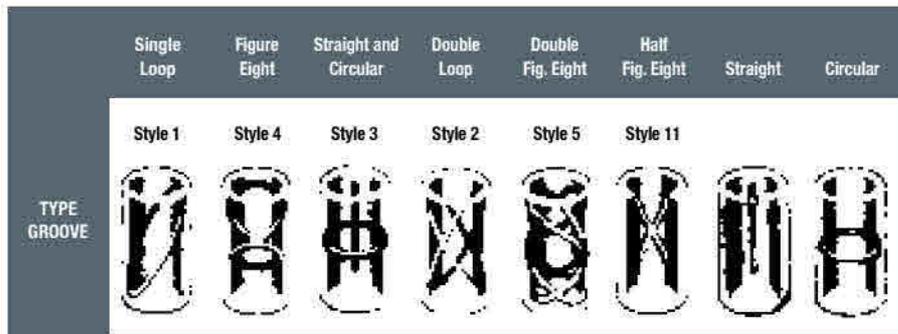
Inside Diameter	
3" or Less ± 0.010 "
Over 3" ± 0.015 "
Outside Diameter	
3" or less $+0.002$ " to $.003$ "
Over 3" $+0.003$ to $.005$ "
All Lengths ± 0.005 "
Concentricity $.003$ " T.I.R.

Clearance

Greater than normal clearance must be allowed: (1) if exceptionally high speed is involved, (2) if higher than normal loading encountered.

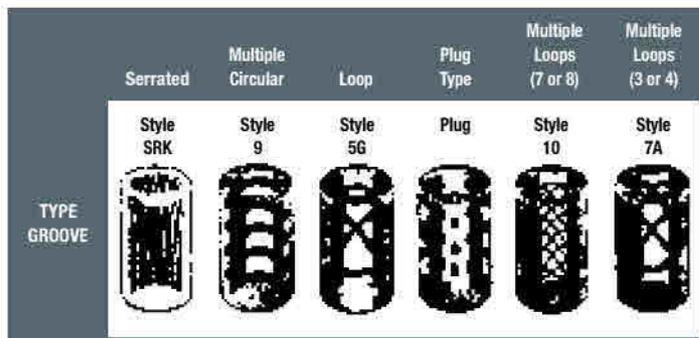


Standard Grooves Oil and Grease



Double Loop and Double Figure Eight recommended for grease only.

Standard Grooves, Graphite Filled



Complete graphiting and grooving facilities.

Cast Bronze Sleeve Bearings

Stock Sizes



I.D.	O.D.	Length	Item Number	Reference Number
3/16	5/16	1/2	104004	C-0305-04
		3/4	104005	C-0305-06
		1	104006	C-0305-08
1/4	3/8	1/4	104007	C-0406-02
		3/8	104008	C-0406-03
		1/2	104009	C-0406-04
		3/4	104010	C-0406-06
		1	104011	C-0406-08
		1-1/4	104012	C-0406-10
1/4	7/16	3/4	104013	C-0407-06
		1	104014	C-0407-08
		1-1/4	104015	C-0407-10
5/16	7/16	3/8	104016	C-0507-03
		1/2	104017	C-0507-04
		3/4	104018	C-0507-06
		1	104019	C-0507-08
		1-1/4	104020	C-0507-10
5/16	1/2	3/4	104021	C-0508-06
		1	104022	C-0508-08
		1-1/4	104023	C-0508-10
3/8	1/2	3/8	104024	C-0608-03
		1/2	104025	C-0608-04
		3/4	104026	C-0608-06
		1	104027	C-0608-08
		1-1/4	104028	C-0608-10
		1-1/2	104029	C-0608-12
3/8	9/16	3/4	104030	C-0609-06
		1	104031	C-0609-08
		1-1/4	104032	C-0609-10
3/8	5/8	3/4	104034	C-0610-06
		1	104035	C-0610-08
		1-1/4	104036	C-0610-10
		1-1/2	104037	C-0610-12
7/16	9/16	1	104038	C-0709-08
		1-1/4	104039	C-0709-10
		1-1/2	104040	C-0709-12
		1-9/16	104041	C-0709-12.5
		1-3/4	104042	C-0709-14
		2	104043	C-0709-16
7/16	5/8	1	104044	C-0710-08
		1-1/4	104045	C-0710-10
		1-1/2	104046	C-0710-12
		2	104047	C-0710-16
7/16	11/16	1-1/2	104048	C-0711-12
		1	104049	C-0712-08
7/16	3/4	1-1/4	104050	C-0712-10
		1-1/2	104051	C-0712-12
7/16	13/16	1-1/2	104052	C-0713-12

I.D.	O.D.	Length	Item Number	Reference Number
1/2	5/8	5/8	104054	C-0810-05
		3/4	104055	C-0810-06
		7/8	104056	C-0810-07
		1	104057	C-0810-08
		1-1/4	104058	C-0810-10
		1-3/8	104059	C-0810-11
		1-1/2	104060	C-0810-12
		1-3/4	104061	C-0810-14
		2	104062	C-0810-16
		2-1/4	104063	C-0810-18
		1/2	11/16	3/4
1	104065			C-0811-08
1-1/4	104066			C-0811-10
1-1/2	104067			C-0811-12
1-3/4	104068			C-0811-14
2	104069			C-0811-16
2-1/4	104070			C-0811-18
2-1/2	104071	C-0811-20		
1/2	3/4	3/4	104073	C-0812-06
		1	104074	C-0812-08
		1-1/4	104075	C-0812-10
		1-1/2	104076	C-0812-12
		1-3/4	104078	C-0812-14
		2	104079	C-0812-16
		2-1/4	104080	C-0812-18
2-1/2	104081	C-0812-20		
2-3/4	104082	C-0812-22		
1/2	13/16	1	104083	C-0813-08
		1-1/2	104084	C-0813-12
		2-1/4	104085	C-0813-18
1/2	7/8	1	104086	C-0814-08
		1-1/4	104087	C-0814-10
		1-1/2	104088	C-0814-12
		1-3/4	104089	C-0814-14
		2	104090	C-0814-16
1/2	1	1	104091	C-0816-08
		1-1/2	104092	C-0816-12
		2	104093	C-0816-16
		2-1/4	104094	C-0816-18
9/16	11/16	1	104095	C-0911-08
		1-1/4	104096	C-0911-10
		1-1/2	104097	C-0911-12
		1-3/4	104099	C-0911-14
		2	104100	C-0911-16
		2-1/4	104101	C-0911-18
2-1/2	104102	C-0911-20		
9/16	3/4	1	104103	C-0912-08
		1-1/4	104104	C-0912-10
		1-1/2	104105	C-0912-12
		1-3/4	104107	C-0912-14
		2	104108	C-0912-16
		2-1/4	104110	C-0912-18
2-1/2	104111	C-0912-20		

Continued on next page

Cast Bronze Sleeve Bearings

Stock Sizes (Cont.)



I.D.	O.D.	Length	Item Number	Reference Number		
9/16	13/16	1	104112	C-0913-08		
		1-1/4	104113	C-0913-10		
		1-1/2	104114	C-0913-12		
		1-3/4	104115	C-0913-14		
		2	104116	C-0913-16		
		2-1/2	104118	C-0913-20		
9/16	7/8	1	104119	C-0914-08		
		1-1/2	104120	C-0914-12		
		2	104121	C-0914-16		
5/8	3/4	1/2	104124	C-1012-04		
		3/4	104125	C-1012-06		
		1	104126	C-1012-08		
		1-1/8	104127	C-1012-09		
		1-1/4	104128	C-1012-10		
		1-1/2	104130	C-1012-12		
		1-3/4	104131	C-1012-14		
		2	104133	C-1012-16		
		2-1/4	104134	C-1012-18		
		2-1/2	104135	C-1012-20		
		3	104136	C-1012-24		
5/8	13/16	1	104137	C-1013-08		
		1-1/4	104138	C-1013-10		
		1-1/2	104140	C-1013-12		
		1-3/4	104141	C-1013-14		
		2	104143	C-1013-16		
		2-1/4	104144	C-1013-18		
		2-1/2	104145	C-1013-20		
5/8	7/8	1/2	104148	C-1014-04		
		3/4	104149	C-1014-06		
		1	104150	C-1014-08		
		1-1/8	104151	C-1014-09		
		1-1/4	104153	C-1014-10		
		1-1/2	104155	C-1014-12		
		1-3/4	104156	C-1014-14		
		2	104159	C-1014-16		
		2-1/4	104160	C-1014-18		
		2-1/2	104162	C-1014-20		
		3	104163	C-1014-24		
		5/8	15/16	1	104165	C-1015-08
				1-1/2	104166	C-1015-12
2	104167			C-1015-16		
2-1/2	104168			C-1015-20		
5/8	1	1	104169	C-1016-08		
		1-1/2	104170	C-1016-12		
		2	104171	C-1016-16		
		2-1/4	104172	C-1016-18		
		2-1/2	104173	C-1016-20		
		3	104174	C-1016-24		
5/8	1-1/8	1-1/2	104175	C-1018-12		
		2	104176	C-1018-16		
		2-1/4	104177	C-1018-18		

I.D.	O.D.	Length	Item Number	Reference Number
11/16	13/16	1	104179	C-1113-08
		1-1/4	104180	C-1113-10
		1-1/2	104181	C-1113-12
		1-3/4	104182	C-1113-14
		2	104183	C-1113-16
		2-1/2	104185	C-1113-20
11/16	7/8	1	104186	C-1114-08
		1-1/4	104187	C-1114-10
		1-1/2	104188	C-1114-12
		1-3/4	104189	C-1114-14
		2	104190	C-1114-16
		2-1/4	104191	C-1114-18
		2-1/2	104192	C-1114-20
11/16	15/16	1	104193	C-1115-08
		1-1/4	104194	C-1115-10
		1-1/2	104195	C-1115-12
		1-3/4	104196	C-1115-14
		2	104197	C-1115-16
		2-1/2	104199	C-1115-20
11/16	1	1-1/4	104201	C-1116-10
		2-1/4	104204	C-1116-18
		2-1/2	104205	C-1116-20
3/4	7/8	3/4	104207	C-1214-06
		1	104208	C-1214-08
		1-1/4	104209	C-1214-10
		1-1/2	104210	C-1214-12
		1-3/4	104211	C-1214-14
		2	104212	C-1214-16
		2-1/4	104213	C-1214-18
		2-1/2	104214	C-1214-20
3/4	15/16	1	104215	C-1215-08
		1-1/4	104217	C-1215-10
		1-3/8	104218	C-1215-11
		1-1/2	104219	C-1215-12
		1-3/4	104220	C-1215-14
		2	104221	C-1215-16
		2-1/4	104222	C-1215-18
		2-1/2	104223	C-1215-20
		2-3/4	104224	C-1215-22
3	104225	C-1215-24		
3/4	1	1/2	104226	C-1216-04
		3/4	104227	C-1216-06
		7/8	104228	C-1216-07
		1	104229	C-1216-08
		1-1/8	104230	C-1216-09
		1-1/4	104231	C-1216-10
		1-3/8	104232	C-1216-11
		1-1/2	104233	C-1216-12
		1-3/4	104234	C-1216-14
		1-7/8	104235	C-1216-15
		2	104237	C-1216-16
		2-1/8	104238	C-1216-17
		2-1/4	104239	C-1216-18
		2-1/2	104241	C-1216-20
		2-3/4	104242	C-1216-22
3	104243	C-1216-24		
3-1/2	104244	C-1216-28		

Cast Bronze Sleeve Bearings Stock Sizes (Cont.)



I.D.	O.D.	Length	Item Number	Reference Number
3/4	1-1/16	1	104245	C-1217-08
		1-1/2	104246	C-1217-12
		2	104247	C-1217-16
		2-1/4	104248	C-1217-18
		2-1/2	104249	C-1217-20
3/4	1-1/8	3	104250	C-1217-24
		1	104251	C-1218-08
		1-1/2	104252	C-1218-12
		2	104253	C-1218-16
		2-1/4	104254	C-1218-18
3/4	1-3/16	2-1/2	104255	C-1218-20
		3	104256	C-1218-24
		1-1/2	104258	C-1219-12
		2	104259	C-1219-16
		3/4	1-1/4	1-1/2
1-3/4	104263			C-1220-14
2	104264			C-1220-16
2-1/4	104265			C-1220-18
2-1/2	104266			C-1220-20
13/16	15/16	3	104267	C-1220-24
		1	104268	C-1315-08
		1-1/2	104271	C-1315-12
		2	104272	C-1315-16
		13/16	1	1-1/2
1-3/4	104275			C-1316-14
2	104276			C-1316-16
2-1/2	104277			C-1316-20
13/16	1-1/16			1-1/2
		2	104280	C-1317-16
		2-1/2	104281	C-1317-20
		2-3/4	104282	C-1317-22
		3	104283	C-1317-24
13/16	1-1/8	1-1/2	104284	C-1318-12
		2	104285	C-1318-16
		13/16	1-3/16	2-1/2
3	104288			C-1319-24
7/8	1			1
		1-1/4	104297	C-1416-10
		1-3/8	104298	C-1416-11
		1-1/2	104299	C-1416-12
		1-5/8	104300	C-1416-13
7/8	1-1/16	2	104301	C-1416-16
		1	104303	C-1417-08
		1-1/4	104304	C-1417-10
		1-1/2	104306	C-1417-12
		1-3/4	104307	C-1417-14
7/8	1-1/8	2	104308	C-1417-16
		2-1/4	104309	C-1417-18
		2-1/2	104310	C-1417-20
		3	104312	C-1417-24

I.D.	O.D.	Length	Item Number	Reference Number		
7/8	1-1/8	3/4	104313	C-1418-06		
		1	104314	C-1418-08		
		1-1/4	104315	C-1418-10		
		1-3/8	104316	C-1418-11		
		1-1/2	104317	C-1418-12		
		1-3/4	104318	C-1418-14		
		2	104320	C-1418-16		
		2-1/4	104322	C-1418-18		
		2-1/2	104323	C-1418-20		
		3	104324	C-1418-24		
7/8	1-3/16	3-1/4	104325	C-1418-26		
		3-1/2	104326	C-1418-28		
		1	104327	C-1419-08		
		1-1/4	104328	C-1419-10		
		1-1/2	104329	C-1419-12		
		2	104330	C-1419-16		
		2-1/2	104331	C-1419-20		
		3	104333	C-1419-24		
		7/8	1-1/4	1-1/2	104334	C-1420-12
				1-3/4	104335	C-1420-14
2	104336			C-1420-16		
2-1/4	104337			C-1420-18		
2-1/2	104338			C-1420-20		
7/8	1-3/8	3	104339	C-1420-24		
		3-1/2	104340	C-1420-28		
		4	104341	C-1420-32		
		1-1/2	104344	C-1422-12		
		1-3/4	104345	C-1422-14		
15/16	1-1/8	2	104346	C-1422-16		
		2-1/2	104347	C-1422-20		
		3	104348	C-1422-24		
		1-1/2	104351	C-1518-12		
		2	104352	C-1518-16		
15/16	1-3/16	2-1/2	104354	C-1518-20		
		1-1/4	104355	C-1519-10		
		1-1/2	104357	C-1519-12		
		2	104358	C-1519-16		
		2-1/4	104359	C-1519-18		
15/16	1-1/4	3	104361	C-1519-24		
		1	104362	C-1520-08		
		1-1/2	104363	C-1520-12		
		2	104364	C-1520-16		
		2-1/2	104366	C-1520-20		
15/16	1-5/16	2-3/4	104367	C-1520-22		
		1-1/2	104368	C-1521-12		
		2	104370	C-1521-16		
		3	104372	C-1521-24		
		1	1-1/8	1	104373	C-1618-08
1-3/8	104374			C-1618-11		
1-1/2	104375			C-1618-12		
1-3/4	104376			C-1618-14		
2	104377			C-1618-16		
1	1-1/8	2-1/2	104378	C-1618-20		

Continued on next page

Cast Bronze Sleeve Bearings

Stock Sizes (Cont.)



I.D.	O.D.	Length	Item Number	Reference Number		
1	1-3/16	7/8	104379	C-1619-07		
		1	105031	C-1619-08		
		1-1/4	104380	C-1619-10		
		1-1/2	104381	C-1619-12		
		1-3/4	104383	C-1619-14		
		2	104384	C-1619-16		
		2-1/2	104386	C-1619-20		
1	1-1/4	3/4	104387	C-1620-06		
		1	104388	C-1620-08		
		1-1/8	104389	C-1620-09		
		1-1/4	104390	C-1620-10		
		1-3/8	104391	C-1620-11		
		1-1/2	104392	C-1620-12		
		1-5/8	104393	C-1620-13		
		1-3/4	104394	C-1620-14		
		1-7/8	105032	C-1620-15		
		2	104395	C-1620-16		
		2-1/4	104397	C-1620-18		
		2-1/2	104398	C-1620-20		
		2-3/4	104399	C-1620-22		
		3	104400	C-1620-24		
		3-1/2	104401	C-1620-28		
				3-3/4	104402	C-1620-30
		4	104403	C-1620-32		
		4-1/2	104404	C-1620-36		
1	1-5/16	1-1/2	104405	C-1621-12		
		2	104406	C-1621-16		
		2-1/4	104407	C-1621-18		
		2-1/2	104408	C-1621-20		
		3	104409	C-1621-24		
		3-1/2	104410	C-1621-28		
		3-3/4	104411	C-1621-30		
				1	104412	C-1622-08
				1-1/4	104413	C-1622-10
		1-1/2	104414	C-1622-12		
		1-3/4	104415	C-1622-14		
		2	104416	C-1622-16		
		2-1/2	104417	C-1622-20		
		2-3/4	104418	C-1622-22		
		3	104419	C-1622-24		
		3-1/4	104420	C-1622-26		
		3-1/2	104421	C-1622-28		
		4	104422	C-1622-32		
		4-1/2	104423	C-1622-36		
1	1-1/2	1-1/2	104424	C-1624-12		
		1-3/4	104425	C-1624-14		
		2	104426	C-1624-16		
		2-1/2	104427	C-1624-20		
		3	104428	C-1624-24		
		4	104429	C-1624-32		
1	1-5/8	2	104431	C-1626-16		
		2-1/2	104432	C-1626-20		
		3	104433	C-1626-24		
		3-1/2	104434	C-1626-28		
				4	104435	C-1626-32

I.D.	O.D.	Length	Item Number	Reference Number
1	1-3/4	6-1/2	104436	C-1628-52
1	2	3	104437	C-1632-24
		6-1/2	104440	C-1632-52
1-1/16	1-5/16	1-1/2	104442	C-1721-12
		2	104443	C-1721-16
		2-1/2	104444	C-1721-20
		3	104445	C-1721-24
		3-1/2	104446	C-1721-28
1-1/16	1-3/8	1	104447	C-1722-08
		2	104448	C-1722-16
		2-1/2	104449	C-1722-20
1-1/16	1-7/16	2-1/2	104450	C-1723-20
		3	104451	C-1723-24
		4	104453	C-1723-32
				1-1/2
1-1/8	1-1/4	1-3/4	104459	C-1820-14
		2	104460	C-1820-16
				2-1/4
		2-1/2	104463	C-1821-20
1-1/8	1-3/8	1	104464	C-1822-08
		1-1/4	104465	C-1822-10
		1-1/2	104466	C-1822-12
		1-3/4	104467	C-1822-14
		2	104468	C-1822-16
		2-1/4	104470	C-1822-18
		2-1/2	104471	C-1822-20
		3	104472	C-1822-24
		3-1/4	104473	C-1822-26
		3-1/2	104474	C-1822-28
		4	104475	C-1822-32
1-1/8	1-7/16	1-1/2	104478	C-1823-12
		2-1/2	104479	C-1823-20
		3	104480	C-1823-24
		3-1/2	104481	C-1823-28
				1-1/2
1-1/8	1-1/2	2	104483	C-1824-16
		2-1/2	104484	C-1824-20
		3	104485	C-1824-24
		3-1/2	104486	C-1824-28
		4	104487	C-1824-32
				1-3/4
1-1/8	1-5/8	2	104490	C-1826-16
		2-1/2	104491	C-1826-20
		3	104492	C-1826-24
		3-1/2	104493	C-1826-28
		4	104494	C-1826-32
		4-1/2	104495	C-1826-36
1-1/8	1-7/8	6-1/2	104496	C-1830-52
1-1/8	2	3	104497	C-1832-24
		5-1/2	104498	C-1832-44

Continued on next page

Cast Bronze Sleeve Bearings

Stock Sizes (Cont.)



I.D.	O.D.	Length	Item Number	Reference Number
1-3/16	1-3/8	1-3/4	104499	C-1922-14
		2	104500	C-1922-16
		2-1/2	104501	C-1922-20
1-3/16	1-7/16	1-1/4	104502	C-1923-10
		1-1/2	104503	C-1923-12
		2	104504	C-1923-16
		2-1/2	104505	C-1923-20
		3	104507	C-1923-24
		3-1/2	104508	C-1923-28
1-3/16	1-1/2	2	104509	C-1924-16
		3	104510	C-1924-24
		4	104511	C-1924-32
1-3/16	1-9/16	1-1/2	104512	C-1925-12
		2-1/2	104513	C-1925-20
		3	104514	C-1925-24
		3-1/2	104515	C-1925-28
1-3/16	1-5/8	2	104516	C-1926-16
		2-1/2	104517	C-1926-20
		3	104518	C-1926-24
1-3/16	1-11/16	2	104519	C-1927-16
		2-1/2	104520	C-1927-20
		3	104521	C-1927-24
		3-1/2	104522	C-1927-28
1-1/4	1-7/16	2	105033	C-2023-16
		2-1/2	104526	C-2023-20
		3	104527	C-2023-24
1-1/4	1-1/2	1	104528	C-2024-08
		1-1/8	104529	C-2024-09
		1-1/4	104530	C-2024-10
		1-3/8	104531	C-2024-11
		1-1/2	104532	C-2024-12
		1-5/8	104533	C-2024-13
		1-3/4	104534	C-2024-14
		2	104536	C-2024-16
		2-1/4	104538	C-2024-18
		2-1/2	104539	C-2024-20
		2-3/4	104540	C-2024-22
		3	104541	C-2024-24
		3-1/4	104542	C-2024-26
		3-1/2	104543	C-2024-28
		4	104545	C-2024-32
		4-1/4	104546	C-2024-34
		4-1/2	104547	C-2024-36
5	104548	C-2024-40		
5-1/2	104549	C-2024-44		
1-1/4	1-9/16	2	104550	C-2025-16
		2-1/2	104552	C-2025-20
		3	104554	C-2025-24
		3-1/2	104555	C-2025-28
		3-3/4	104556	C-2025-30

I.D.	O.D.	Length	Item Number	Reference Number
1-1/4	1-5/8	1-3/4	104557	C-2026-14
		2	104559	C-2026-16
		2-1/2	104560	C-2026-20
		3	104561	C-2026-24
		3-1/4	104562	C-2026-26
		3-1/2	104563	C-2026-28
		4	104564	C-2026-32
1-1/4	1-11/16	4-1/2	104566	C-2026-36
		4-3/4	104567	C-2026-38
		2	104568	C-2027-16
		2-1/2	104569	C-2027-20
		3-1/4	104570	C-2027-26
1-1/4	1-3/4	3-1/2	104571	C-2027-28
		1-1/4	105034	C-2028-10
		1-3/4	104572	C-2028-14
		2	104573	C-2028-16
1-1/4	1-7/8	2-1/4	104574	C-2028-18
		2-1/2	104575	C-2028-20
		2-3/4	104576	C-2028-22
		3	104577	C-2028-24
		3-1/2	104578	C-2028-28
		3-3/4	104579	C-2028-30
		4	104580	C-2028-32
		5	104582	C-2028-40
1-1/4	2	2	104583	C-2030-16
		2-1/2	104584	C-2030-20
		3	104585	C-2030-24
		4	104586	C-2030-32
1-1/4	2	3	104587	C-2032-24
		4	104588	C-2032-32
		6-1/2	104589	C-2032-52
1-5/16	1-1/2	1-3/4	104594	C-2124-14
		3	104595	C-2124-24
1-5/16	1-9/16	3	104596	C-2125-24
		3-1/2	104597	C-2125-28
		4	104598	C-2125-32
1-5/16	1-5/8	2	104599	C-2126-16
		2-1/2	104600	C-2126-20
		3	104601	C-2126-24
		4	104602	C-2126-32
		4-3/4	104603	C-2126-38
1-5/16	1-11/16	2-1/2	104604	C-2127-20
		3	104605	C-2127-24
		4	104607	C-2127-32
1-5/16	1-13/16	3	104608	C-2129-24
		4	104610	C-2129-32
1-5/16	1-7/8	3-1/2	104611	C-2130-28
		4-1/2	104612	C-2130-36
1-3/8	1-1/2	1-3/4	104613	C-2224-14
		2	104615	C-2224-16
		2-1/2	104616	C-2224-20

Continued on next page

Cast Bronze Sleeve Bearings

Stock Sizes (Cont.)



I.D.	O.D.	Length	Item Number	Reference Number
1-3/8	1-5/8	1-1/4	104617	C-2226-10
		1-1/2	105035	C-2226-12
		2	104618	C-2226-16
		3	104619	C-2226-24
		3-1/4	104620	C-2226-26
		3-1/2	104621	C-2226-28
		4	104622	C-2226-32
1-3/8	1-11/16	4-1/2	104623	C-2226-36
		3-1/2	104624	C-2227-28
1-3/8	1-3/4	2	104625	C-2228-16
		2-1/4	104626	C-2228-18
		2-1/2	104627	C-2228-20
		3	104628	C-2228-24
		3-1/2	104630	C-2228-28
		4	104631	C-2228-32
1-3/8	1-7/8	3	104632	C-2230-24
		3-1/2	104633	C-2230-28
		4	104634	C-2230-32
		4-1/2	104635	C-2230-36
1-3/8	2	3	104636	C-2232-24
		4	104637	C-2232-32
1-3/8	2-1/8	6-1/2	104638	C-2234-52
1-7/16	1-5/8	1-3/4	104639	C-2326-14
		2-3/4	104640	C-2326-22
		3	104641	C-2326-24
1-7/16	1-11/16	2-1/2	104642	C-2327-20
		3	104643	C-2327-24
		3-1/2	104644	C-2327-28
		4	104645	C-2327-32
		4-1/4	104646	C-2327-34
1-7/16	1-3/4	2-1/4	104648	C-2328-18
		3	104649	C-2328-24
		4	104650	C-2328-32
1-7/16	1-13/16	3	104651	C-2329-24
		3-1/4	104652	C-2329-26
		3-1/2	104653	C-2329-28
		4	104654	C-2329-32
		4-1/4	104655	C-2329-34
		5	104656	C-2329-40
1-7/16	1-7/8	3	104657	C-2330-24
		4	104658	C-2330-32
		4-1/2	104660	C-2330-36
		5	104661	C-2330-40
1-7/16	1-15/16	2	104662	C-2331-16
		3	104663	C-2331-24
		3-1/2	104664	C-2331-28
		4	104665	C-2331-32
		4-1/2	104667	C-2331-36
		5	104668	C-2331-40
		5-1/2	104669	C-2331-44
1-7/16	2	4	104672	C-2332-32

I.D.	O.D.	Length	Item Number	Reference Number
1-1/2	1-5/8	2	104678	C-2426-16
1-1/2	1-11/16	2-3/4	104679	C-2427-22
1-1/2	1-3/4	1	104680	C-2428-08
		1-1/4	104681	C-2428-10
		1-1/2	104682	C-2428-12
		1-3/4	104683	C-2428-14
		2	104684	C-2428-16
		2-1/4	104686	C-2428-18
		2-1/2	104687	C-2428-20
		3	104688	C-2428-24
		3-1/2	104689	C-2428-28
		4	104690	C-2428-32
		4-1/2	104691	C-2428-36
5	104692	C-2428-40		
5-1/2	104693	C-2428-44		
1-1/2	1-13/16	3	104694	C-2429-24
1-1/2	1-7/8	1-1/2	104695	C-2430-12
		2	104696	C-2430-16
		2-1/2	104697	C-2430-20
		2-3/4	104698	C-2430-22
		3	104699	C-2430-24
		3-1/2	104700	C-2430-28
		4	104701	C-2430-32
1-1/2	2	4-1/2	104704	C-2430-36
		5	104705	C-2430-40
		5-1/2	104706	C-2430-44
		2	105036	C-2432-16
		2-1/2	104707	C-2432-20
1-1/2	2-1/4	3	104708	C-2432-24
		3-1/2	104709	C-2432-28
		4	104710	C-2432-32
		4-1/2	104711	C-2432-36
		5	104712	C-2432-40
1-1/2	2-1/8	3	104713	C-2434-24
		4	104714	C-2434-32
1-1/2	2-1/4	3	104716	C-2436-24
		4	104717	C-2436-32
		5	104718	C-2436-40
		6-1/2	104719	C-2436-52
1-9/16	1-13/16	3	104723	C-2529-24
		3-1/2	104724	C-2529-28
		4	104725	C-2529-32
1-9/16	1-15/16	3-1/2	104726	C-2531-28
		4-1/2	104727	C-2531-36
1-5/8	1-7/8	2-1/4	104728	C-2630-18
		2-1/2	104729	C-2630-20
		3	104730	C-2630-24
		3-3/4	104731	C-2630-30

Continued on next page

Cast Bronze Sleeve Bearings

Stock Sizes (Cont.)



I.D.	O.D.	Length	Item Number	Reference Number
1-5/8	2	1-3/4	104736	C-2632-14
		2-1/2	104737	C-2632-20
		3	104738	C-2632-24
		3-1/2	104739	C-2632-28
		4	104740	C-2632-32
		4-1/2	104741	C-2632-36
		5	104742	C-2632-40
1-5/8	2-1/8	5-1/2	104743	C-2632-44
		3	104744	C-2634-24
		4	104745	C-2634-32
		4-1/2	104746	C-2634-36
		5	104747	C-2634-40
1-11/16	1-15/16	3	104748	C-2731-24
		3-1/2	104749	C-2731-28
1-11/16	2	3-1/2	104750	C-2732-28
		4-1/2	104751	C-2732-36
1-11/16	2-1/16	3	104752	C-2733-24
		3-1/2	104753	C-2733-28
		4	104754	C-2733-32
		4-1/2	104755	C-2733-36
		5	104756	C-2733-40
		5-1/2	104757	C-2733-44
1-11/16	2-3/16	2	104758	C-2735-16
		2-1/2	104759	C-2735-20
		3	104760	C-2735-24
		3-1/2	104761	C-2735-28
		4	104762	C-2735-32
		4-1/2	104763	C-2735-36
1-11/16	2-1/4	5-1/2	104766	C-2735-44
		3	104767	C-2736-24
1-3/4	2	4-1/2	104768	C-2736-36
		1-1/2	104772	C-2832-12
1-3/4	2	2	104773	C-2832-16
		2-1/4	104774	C-2832-18
		2-1/2	104775	C-2832-20
		3	104776	C-2832-24
		4	104777	C-2832-32
		4-1/2	104778	C-2832-36
		5-1/4	104779	C-2832-42
		3-1/2	104780	C-2833-28
		2-1/2	105037	C-2834-20
		2-3/4	104781	C-2834-22
1-3/4	2-1/8	3-1/4	104782	C-2834-26
		3-1/2	104783	C-2834-28
1-3/4	2-1/8	4	104784	C-2834-32
		4-1/4	104785	C-2834-34
		5	104786	C-2834-40
		5-1/2	104787	C-2834-44

I.D.	O.D.	Length	Item Number	Reference Number
1-3/4	2-1/4	1-3/4	104788	C-2836-14
		2	104789	C-2836-16
		2-1/2	104790	C-2836-20
		3	104791	C-2836-24
		3-1/2	104792	C-2836-28
		4	104793	C-2836-32
		4-1/4	104794	C-2836-34
1-3/4	2-3/8	5	104796	C-2836-40
		3-1/2	104797	C-2838-28
		4-1/4	104798	C-2838-36
		5	104799	C-2838-40
		6-1/2	104801	C-2840-52
1-3/4	2-1/2	4	104802	C-2935-32
		5-1/4	104803	C-2935-42
1-13/16	2-3/16	4	104804	C-2937-32
		5	104805	C-2937-40
1-7/8	2-1/8	2-1/2	104806	C-3034-20
		3	104807	C-3034-24
		4	104808	C-3034-32
1-7/8	2-1/4	3	104809	C-3036-24
		3-1/4	104810	C-3036-26
		4	104812	C-3036-32
		5	104815	C-3036-40
		3	104816	C-3038-24
1-7/8	2-3/8	4	104817	C-3038-32
		5-1/4	104818	C-3038-42
		2	104820	C-3135-16
1-15/16	2-3/16	3	104821	C-3135-24
		4	104822	C-3135-32
		3	104823	C-3136-24
1-15/16	2-1/4	4-1/2	104824	C-3136-36
		3-1/2	104825	C-3137-28
1-15/16	2-5/16	4	104826	C-3137-32
		5	104827	C-3137-40
		5-1/2	104828	C-3137-44
		6-1/4	104829	C-3137-50
		4	104830	C-3138-24
1-15/16	2-3/8	5	104831	C-3138-32
		5-1/2	104832	C-3138-44
		3	104833	C-3139-24
1-15/16	2-7/16	4	104834	C-3139-32
		5	104835	C-3139-40
		5-1/2	104836	C-3139-44
		3	104837	C-3140-24
1-15/16	2-1/2	5	104838	C-3140-40

Continued on next page

Cast Bronze Sleeve Bearings

Stock Sizes (Cont.)



I.D.	O.D.	Length	Item Number	Reference Number
2	2-1/4	2	104839	C-3236-16
		2-1/2	104840	C-3236-20
		3	104841	C-3236-24
		3-1/2	104842	C-3236-28
		3-3/4	104843	C-3236-30
		4	104844	C-3236-32
		4-1/2	104845	C-3236-36
2	2-3/8	5	104846	C-3236-40
		2-1/2	104847	C-3238-20
		3	104848	C-3238-24
		3-1/2	104849	C-3238-28
		4	104850	C-3238-32
2	2-1/2	4-1/2	104851	C-3238-36
		2	105044	C-3240-16
		2-1/2	104853	C-3240-20
		3	104854	C-3240-24
		3-1/2	104855	C-3240-28
		4	104856	C-3240-32
		4-1/2	104857	C-3240-36
		5	104858	C-3240-40
		5-1/2	104859	C-3240-44
		6	104860	C-3240-48
2	2-5/8	4	104861	C-3242-32
2	2-3/4	6	105038	C-3244-48
		6-1/2	104864	C-3244-52
2-1/8	2-1/2	3	104865	C-3440-24
		4	104866	C-3440-32
2-1/8	2-5/8	4	104867	C-3442-32
		5	104868	C-3442-40
		6	104869	C-3442-48
2-3/16	2-5/8	4	104870	C-3542-32
		5	104871	C-3542-40
2-3/16	2-11/16	3-1/2	104872	C-3543-28
		4	104873	C-3543-32
		4-1/2	104874	C-3543-36
		5	104875	C-3543-40
2-3/16	2-3/4	4-1/2	104876	C-3544-36
		5-1/4	104877	C-3544-42
		6	104878	C-3544-48
2-3/16	2-7/8	4-1/2	104879	C-3546-36
2-1/4	2-1/2	3	105039	C-3640-24
		3-1/2	104880	C-3640-28
		4	104881	C-3640-32
2-1/4	2-5/8	3	104882	C-3642-24
		4	104883	C-3642-32
		5	104884	C-3642-40
2-1/4	2-11/16	4-3/4	104886	C-3643-38

I.D.	O.D.	Length	Item Number	Reference Number
2-1/4	2-3/4	3	105040	C-3644-24
		3-1/2	104887	C-3644-28
		4	104888	C-3644-32
		4-1/2	104889	C-3644-36
		5	104890	C-3644-40
		6	104891	C-3644-48
2-1/4	3	6-1/2	104892	C-3644-52
		3-1/2	104893	C-3648-28
2-1/4	3-1/8	5	104894	C-3648-40
		6-1/2	104895	C-3650-52
2-3/8	2-3/4	4	104896	C-3844-32
		5	104897	C-3844-40
		6	104898	C-3844-48
2-3/8	2-7/8	4	104899	C-3846-32
		5	104900	C-3846-40
		6	104901	C-3846-48
2-7/16	2-3/4	4	104902	C-3944-32
		5	104903	C-3944-40
2-7/16	2-7/8	3	104905	C-3946-24
		5	104906	C-3946-40
2-7/16	2-15/16	4	104907	C-3947-32
		5	104908	C-3947-40
		6-1/4	104909	C-3947-50
2-7/16	3	3-3/4	104911	C-3948-30
		5	104912	C-3948-40
		6-1/4	104913	C-3948-50
2-1/2	2-3/4	3	104914	C-4044-24
		4	104915	C-4044-32
		5	104917	C-4044-40
2-1/2	2-7/8	3-1/4	104919	C-4046-26
		4-1/2	104921	C-4046-36
		5-1/2	104922	C-4046-44
2-1/2	3	3	104923	C-4048-24
		3-3/4	104924	C-4048-30
		4	104925	C-4048-32
		5	104926	C-4048-40
		6	104927	C-4048-48
		7	104928	C-4048-56
2-1/2	3-1/8	3-1/2	104929	C-4050-28
		4	104930	C-4050-32
		4-1/2	104931	C-4050-36
2-1/2	3-1/4	6-3/4	104932	C-4050-54
		4	104933	C-4052-32
		5	104934	C-4052-40
2-1/2	3-1/4	6	104935	C-4052-48
		7-1/4	104936	C-4052-58
		6-1/2	104937	C-4056-52
2-5/8	3	3	104939	C-4248-24
		4	104941	C-4248-32
		5	104942	C-4248-40

Continued on next page

Cast Bronze Sleeve Bearings Stock Sizes (Cont.)



I.D.	O.D.	Length	Item Number	Reference Number
2-5/8	3-1/8	5	104943	C-4250-40
		6	104944	C-4250-48
		7-1/4	104945	C-4250-58
2-5/8	3-1/4	7	104946	C-4252-56
2-5/8	3-3/8	6-1/2	104947	C-4254-52
2-11/16	3-3/16	4	104948	C-4351-32
		5	104949	C-4351-40
		6-1/4	104950	C-4351-50
2-3/4	3-1/8	4	104951	C-4450-32
		5	104952	C-4450-40
		6	104953	C-4450-48
2-3/4	3-1/4	4	104954	C-4452-32
		5	104955	C-4452-40
		6	104956	C-4452-48
		7	104957	C-4452-56
2-3/4	3-3/8	4	104958	C-4454-32
		6-1/2	104959	C-4454-52
2-3/4	3-1/2	6-1/2	104960	C-4456-32
2-7/8	3-3/8	4	104961	C-4654-32
		6	104962	C-4654-48
		8	104963	C-4654-64
2-7/8	3-1/2	4-1/2	104964	C-4656-36
		6-3/4	104965	C-4656-54
2-15/16	3-7/16	3-1/2	104967	C-4755-28
		5	104968	C-4755-40
		6-1/2	104969	C-4755-52
2-15/16	3-3/4	7	105041	C-4760-56
3	3-3/8	4-1/2	104973	C-4854-36
		8	104974	C-4854-64
		3	104975	C-4856-24
3	3-1/2	4	104976	C-4856-32
		4-1/2	104977	C-4856-36
		5-1/2	105042	C-4856-44
		6	104978	C-4856-48
		9	104979	C-4856-72
		3	3-5/8	5
3	3-5/8	6-1/2	104981	C-4858-52
		8	104982	C-4858-64
3	3-3/4	6-1/4	104983	C-4860-50
3	4	6-1/2	104984	C-4864-52
3-1/4	3-1/2	4	104985	C-5256-32
3-1/4	3-3/4	5	104986	C-5260-40
		6	104987	C-5260-48
		9	104988	C-5260-72
3-7/16	3-15/16	4-1/2	104989	C-5563-36
		6-1/2	104990	C-5563-52

I.D.	O.D.	Length	Item Number	Reference Number
3-1/2	4	3	104991	C-5664-24
		4	104992	C-5664-32
		5-1/2	104993	C-5664-44
		6	105043	C-5664-48
		7	104994	C-5664-56
3-1/2	4-1/8	6	104995	C-5666-48
3-1/2	4-1/4	4-1/2	104997	C-5668-36
		7	104998	C-5668-56
		9-3/4	104999	C-5668-78
3-3/4	4-1/4	5	105000	C-6068-40
		7	105001	C-6068-56
3-3/4	4-1/2	6-1/2	105002	C-6072-52
4	4-1/2	4	105003	C-6472-32
		6	105004	C-6472-48
		7	105005	C-6472-56
4	4-3/4	5	105006	C-6476-40
		6	105007	C-6476-48
		7	105008	C-6476-56
4	5	5	105009	C-6480-40
		6	105010	C-6480-48
		7	105011	C-6480-56
4-1/4	4-3/4	5	105012	C-6876-40
		6	105013	C-6876-48
		7	105014	C-6876-56
4-1/4	5	5	105015	C-6880-40
		6	105016	C-6880-48
		7	105017	C-6880-56
4-1/2	5	6	105019	C-7280-48
		7	105020	C-7280-56
		8	105021	C-7280-64
4-1/2	5-1/2	6	105022	C-7288-48
		7	105023	C-7288-56
		8	105024	C-7288-64
		5	105025	C-8088-48
5	5-1/2	7	105026	C-8088-56
		8	105027	C-8088-64
		5	105028	C-8096-56
5	6	7	105029	C-8096-64
		8	105030	C-8096-72
		9	105030	C-8096-72

PLUG GRAHITE BEARINGS



Advantages of #500 Series Bearings

- #500 Series Self-lubricating Bearings can be utilized where heavy loads must be supported at low to medium speeds.
- Bearings have high mechanical strength with excellent wear resistance and self-lubrication properties exhibiting stable performance and durability under severe operating conditions.
- No form of supplementary lubrication is required. A film of solid lubricant is transferred to the shaft as it starts to run. In operation, both surfaces burnish quickly and result in a highly polished bearing surface capable of withstanding extreme pressure.

#500 Series Materials

Normally, bronze alloy is used as the base material for #500 series. Other materials such as cast iron, stainless steel and even tool steels could be used according to the applications involving extreme temperatures, environments corrosive to bronze, and loads exceeding the compressive strength of bronze.



Reasons for Selecting Graphite Plugged Self-Lubricating Products

1. Totally Self-Lubricating: No oil or grease required.

The self-lubricating features allow bearings to be used where oiling is difficult, expensive to implement, and where grease/oil cannot be used. Excellent lubrication is achieved even under high loads at low speeds.

2. Excellent Wear Resistance:

Excellent wear resistance is achieved under severe working conditions, such as heavy load, low velocity, reciprocating, oscillating and intermittent motions where the formation of oil film is difficult.

3. Low Coefficient of Friction: 0.04 to 0.2 typical.

Self-lubrication with specially embedded solid lubricants reduces friction.

4. Wide Operating Temperature Ranges: -415° to 1,100°F

Superior performance is exhibited under high and low temperature conditions.

5. Corrosion and Chemical Resistance:

Performance is not affected by water and caustic chemicals.

6. Designed to Exceed Your Requirements:

High precision products with close tolerances.

7. Cost Competitive:

Maintenance, replacement, and end-item downtime costs reduced due to the exceptional service life compared to similar self-lubricating products.

Unlimited Applications

High Temperature

- Steel Mill
- Ovens
- Furnace Dragouts
- Drying Equipment
- Kilns
- Roasters
- Heat Exchangers
- Vulcanizing Cars

Water-Resisting

- Dam Gates
- Submersible Pumps
- Hydro-Electric
- Off-Shore Structures
- Dock and Dredge Equipment

Anti-Chemical

- Chemical Plants
- Plating Equipment
- Waste Water Treat Equipment
- Dyeing Machines
- Oil & Chemical
- Refinery Equipment

Construction, Mining, Loading

- Mixers, Grinders, Pulverizers
- Construction Machines
- Mining Rigs
- Conveyer & Chain
- Arm Link Bearings
- Power Shovels

Automobile Manufacturing

- Press Dies
- Welding Assembly Line
- Painting & Drying Lines
- Chain Conveyers
- Machine Tools

Vessels

- Deck Cranes
- Winches
- Hatch Covers
- Rudder Arms
- Windlass
- Derrick & Hoisting Equipment

Heavy Industries

- Steel Tube Plant Machinery
- Tire & Paper Mills
- Earth Moving Equipment
- Power Generating Stations
- Toggle Link Bearings for Injection Mold Machines

Bridge & Elevated Rail

- Bridge Bearings
- Roller Gates
- Plate Girder, Truss, Suspension
- Nuclear Related Reactor Supports
- Steam Generator Supports

Bearing Metals

Code	#500SP	#500B	#500F	#500S
Base Metal	High Strength Manganese Bronze	Red Brass	Cast Iron	Stainless Steel
Application	General Use High Load Under Water	General Use Medium Speed	High Temperature + 400°C (+725°F)	Chemical Resistance High Temperature + 600°C (1,100°F)

Code	#500AL	#500SPX	#500HCA
Base Metal	Aluminum Bronze	Special Alloy	Special Alloy
Application	Sea Water	Higher Loads than #500SP	Higher Loads than #500SPX

Note: When used for high strength bearings, alloys #500 SP, #500SPX and #500HCA require hardened shafts.

Solid Lubricants

A bearing and its mating surface should always be separated by a film of lubricant. This product is made of proprietary solid lubricant compounds consisting of graphite, PTFE, metallic oxides, white metals, waxes, and other minerals that are compressed and heat treated into dense plugs. These plugs are then installed into the base metal.

Lubricants used in these products are solid, permanent, and completely self-lubricating. They are constantly tested and monitored in our laboratories to ensure superior bearing performance.

There are different solid lubricants for both high temperature (greater than 300°F) and aquatic applications. Please contact our application engineers for assistance with these special operating conditions.

Solid Lubricants

Applications involving bearing temperatures greater than 300°F require critical engineering to optimize performance. The thermal expansion of mating components must also be considered to allow for proper clearance or interference. Not only bearing materials and lubricants but differences in thermal expansion of the housing and journal must be carefully calculated to ensure satisfactory performance. Therefore, it is important that our application engineers advise on all high temperature applications.

Characteristics for Proper Material Selection

Selection of the proper bearing material is essential to obtaining both long bearing life and maintenance free operation. Please consult the following charts of operating conditions, mechanical and physical properties, and chemical resistance when selecting the bearing material for your specific application. Please consult our application engineers for other available metals (for extreme high load and harsh environment).

Operating Conditions

Item Code	Base Metal	Allowable Pressure		Allowable Velocity (fpm)		Allowable PV Value		Allowable Velocity (fpm)	
		(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
#500SP	High Strength Manganese Bronze	4,300 (14,200)	4,300	98	196	46,000	92,000	570	300
#500B	Red Brass	2,100 (7,100)	2,100	160	320	28,000	46,000	750	300
#500F	Cast Iron	700 (10,500)	1,140	160	320	23,000	46,000	750	300

**Note: () indicates Static Pressure, (1): Self-lubricating, (2): Periodic Lubrication with grease/oil

Mechanical and Physical Properties

Test Item Code	Specific Gravity	Tensile Strength PSI	Brinell Hardness (3,000 Kg load) HB	Modulus of Longitudinal Elasticity KPSI	Elongation %
#500SP	8.2	110,000	220	46,400 ~ 65,300	12
#500B	8.7	28,000	50-65 (500Kg load)	44,300	15
#500F	7.2	35,000	180	46,000 ~	-

Test Item Code	Thermal Linear Expansion Coefficient X10 ⁻⁵ /°F	Coefficient of Friction μ (min.)	Coefficient of Heat Conduction Cal/Sec °F in	Impact Strength (Notched Izod) ft lb/in.
#500SP	1.6 ~ 2.0	0.04 ~ 0.02	.90	37.5
#500B	1.6 ~ 1.8	0.04 ~ 0.02	.77	18.4
#500F	1.0 ~ 1.2	0.04 ~ 0.02	.55	5.5

#500SP: is high strength bond that is best suited for high load operating conditions.

#500B: is red brass for use under medium load conditions that is also suitable for high temperature applications.

#500F: is a superior cast iron for both high temperature and medium speed applications.

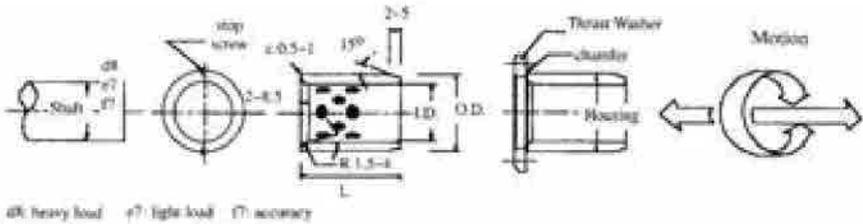
Chemical Resistance

Code Concentration Chemicals	#500SP		#500B		#500F		Remark
	Over 10%	Under 10%	Over 10%	Under 10%	Over 10%	Under 10%	
Hydrochloric Acid	□	△	□	□	□	□	□: Usable □: Not Usable △: Usable under influence
Sulfuric Acid	□	□	□	□	□	△	
Nitric acid	□	□	□	□	□	□	
Phosphoric Acid	□	□	□	□	□	△	
Sodium Hydroxide	□	□	□	□	□	□	

Graphite plugged, self-lubricating bearings are our specialty. Our proprietary solid lubricant is a cured, compact cylinder inserted into holes machined through the bearing wall. This provides higher quality and superior performance than the uncured lubricant mechanically forced into grooves on the bearing.

#500 Series Bushing (HB)

Standard Metric Sizes



(unit: mm)

Part Number	Dimension			Applicable Washer	Part Number	Dimension			Applicable Washer	Tolerances		
	I.D.	O.D.	Length			I.D.	O.D.	Length		I.D.	max (+)	min (+)
HB-081208	8	12	8	-	HB-152125	15	21	25	TW-15			
HB-081210	8	12	10	-	HB-152130	15	21	30	TW-15			
HB-081212	8	12	12	-	HB-162210	16	22	10	TW-16			
HB-081215	8	12	15	-	HB-162212	16	22	12	TW-16			
HB-101408	10	14	8	TW-10	HB-162216	16	22	16	TW-16			
HB-101410	10	14	10	TW-10	HB-162220	16	22	20	TW-16			
HB-101412	10	14	12	TW-10	HB-162225	16	22	25	TW-16			
HB-101415	10	14	15	TW-10	HB-162230	16	22	30	TW-16			
HB-101420	10	14	20	TW-10	HB-162235	16	22	35	TW-16			
HB-121810	12	18	10	TW-12	HB-162240	16	22	40	TW-16			
HB-121812	12	18	12	TW-12	HB-182415	18	24	15	TW-18			
HB-121815	12	18	15	TW-12	HB-182416	18	24	16	TW-18			
HB-121816	12	18	16	TW-12	HB-182420	18	24	20	TW-18			
HB-121820	12	18	20	TW-12	HB-182425	18	24	25	TW-18			
HB-121825	12	18	25	TW-12	HB-182430	18	24	30	TW-18			
HB-121830	12	18	30	TW-12	HB-202815	20	28	15	TW-20			
HB-131910	13	19	10	TW-13	HB-202816	20	28	16	TW-20			
HB-131915	13	19	15	TW-13	HB-202820	20	28	20	TW-20			
HB-131920	13	19	20	TW-13	HB-202825	20	28	25	TW-20			
HB-142010	14	20	10	TW-14	HB-202830	20	28	30	TW-20			
HB-142012	14	20	12	TW-14	HB-202835	20	28	35	TW-20			
HB-142015	14	20	15	TW-14	HB-202840	20	28	40	TW-20			
HB-142020	14	20	20	TW-14	HB-202850	20	28	50	TW-20			
HB-142025	14	20	25	TW-14	HB-203016	20	30	16	TW-20			
HB-142030	14	20	30	TW-14	HB-203020	20	30	20	TW-20			
HB-152110	15	21	10	TW-15	HB-203025	20	30	25	TW-20			
HB-152112	15	21	12	TW-15	HB-203030	20	30	30	TW-20			
HB-152115	15	21	15	TW-15	HB-203035	20	30	35	TW-20			
HB-152116	15	21	16	TW-15	HB-203040	20	30	40	TW-20			
HB-152120	15	21	20	TW-15	HB-253316	25	33	16	TW-25			
										8	0.028	0.013
										10	0.028	0.013
										12	0.034	0.016
										13	0.034	0.016
										14	0.034	0.016
										15	0.034	0.016
										16	0.034	0.016
										18	0.034	0.016
										20	0.041	0.020
										25	0.041	0.020
										30	0.041	0.020
										31.5	0.050	0.025
										35	0.050	0.025
										40	0.050	0.025
										45	0.050	0.025
										50	0.050	0.025
										55	0.060	0.030
										60	0.060	0.030
										63	0.060	0.030
										65	0.060	0.030
										70	0.060	0.030
										75	0.060	0.030
										80	0.060	0.030
										90	0.071	0.036
										100	0.071	0.036
										110	0.071	0.036
										120	0.071	0.036
										125	0.083	0.043
										130	0.083	0.043
										140	0.083	0.043
										150	0.083	0.043
										160	0.083	0.043

#500 Series Bushing (HB)

Standard Metric Sizes

(unit: mm)

Part Number	Dimension			Applicable Washer	Part Number	Dimension			Applicable Washer
	I.D.	O.D.	Length			I.D.	O.D.	Length	
HB-253320	25	33	20	TW-25	HB-405070	40	50	70	TW-40
HB-253325	25	33	25	TW-25	HB-405080	40	50	80	TW-40
HB-253330	25	33	30	TW-25	HB-405530	40	55	30	TW-40
HB-253335	25	33	35	TW-25	HB-405535	40	55	35	TW-40
HB-253340	25	33	40	TW-25	HB-405540	40	55	40	TW-40
HB-253350	25	33	50	TW-25	HB-405550	40	55	50	TW-40
HB-253360	25	33	60	TW-25	HB-405560	40	55	60	TW-40
HB-253516	25	35	16	TW-25	HB-455630	45	56	30	TW-45
HB-253520	25	35	20	TW-25	HB-455635	40	56	35	TW-45
HB-253530	25	35	30	TW-25	HB-455640	45	56	40	TW-45
HB-253535	25	35	35	TW-25	HB-455650	45	56	50	TW-45
HB-253540	25	35	40	TW-25	HB-455660	45	56	60	TW-45
HB-253550	25	35	50	TW-25	HB-456030	45	60	30	TW-45
HB-302820	30	28	20	TW-30	HB-456035	45	60	35	TW-45
HB-302825	30	28	25	TW-30	HB-456040	45	60	40	TW-45
HB-303830	30	38	30	TW-30	HB-456050	45	60	50	TW-45
HB-303835	30	38	35	TW-35	HB-456060	45	60	60	TW-45
HB-303840	30	38	40	TW-30	HB-456070	45	60	70	TW-45
HB-303850	30	38	50	TW-30	HB-456080	45	60	80	TW-45
HB-303860	30	38	60	TW-30	HB-506030	50	60	30	TW-50
HB-304020	30	40	20	TW-30	HB-506035	50	60	35	TW-50
HB-304025	30	40	25	TW-30	HB-506040	50	60	40	TW-50
HB-304030	30	40	30	TW-30	HB-506050	50	60	50	TW-50
HB-304035	30	40	35	TW-30	HB-506060	50	60	60	TW-50
HB-304040	30	40	40	TW-30	HB-506070	50	60	70	TW-50
HB-304050	30	40	50	TW-30	HB-506080	50	60	80	TW-50
HB-304060	30	40	60	TW-30	HB-506230	50	62	30	TW-50
HB-314030	31.5	40	30	TW-31	HB-506235	50	62	35	TW-50
HB-314040	31.5	40	40	TW-31	HB-506240	50	62	40	TW-50
HB-354430	35	44	30	TW-31	HB-506250	50	62	50	TW-50
HB-354435	35	44	35	TW-35	HB-506260	50	62	60	TW-50
HB-354440	35	44	40	TW-35	HB-526270	50	62	70	TW-50
HB-354450	35	44	50	TW-35	HB-506530	50	65	30	TW-50
HB-354460	35	44	60	TW-35	HB-506540	50	65	40	TW-50
HB-354520	35	45	20	TW-35	HB-506550	50	65	50	TW-50
HB-354525	35	45	25	TW-35	HB-506560	50	65	60	TW-50
HB-354530	35	45	30	TW-35	HB-506570	50	65	70	TW-50
HB-354535	35	45	35	TW-35	HB-506580	50	65	80	TW-50
HB-354540	35	45	40	TW-35	HB-5065100	50	65	100	TW-50
HB-354550	35	45	50	TW-35	HB-557040	55	70	40	TW-55
HB-354560	35	45	60	TW-35	HB-557050	55	70	50	TW-55
HB-405020	40	50	20	TW-40	HB-557060	55	70	60	TW-55
HB-405025	40	50	25	TW-40	HB-557070	55	70	70	TW-55
HB-405030	40	50	30	TW-40	HB-607430	60	74	30	TW-60
HB-405035	40	50	35	TW-40	HB-607435	60	74	35	TW-60
HB-405040	40	50	40	TW-40	HB-607440	60	74	40	TW-60
HB-405050	40	50	50	TW-40	HB-607450	60	74	50	TW-60
HB-405060	40	50	60	TW-40	HB-607460	60	74	60	TW-60

I.D.	Tolerances	
	max (+)	min (+)
12	0.018	0.007
14	0.018	0.007
18	0.018	0.007
19	0.021	0.008
21	0.021	0.008
22	0.021	0.008
24	0.021	0.008
28	0.021	0.008
30	0.025	0.009
33	0.025	0.009
35	0.025	0.009
38	0.025	0.009
40	0.025	0.009
44	0.025	0.009
45	0.025	0.009
50	0.025	0.009
55	0.030	0.011
56	0.030	0.011
60	0.030	0.011
62	0.030	0.011
65	0.030	0.011
70	0.030	0.011
74	0.030	0.011
75	0.030	0.011
80	0.030	0.011
85	0.035	0.013
90	0.035	0.013
95	0.035	0.013
96	0.035	0.013
100	0.035	0.013
110	0.035	0.013
120	0.035	0.013
130	0.040	0.015
140	0.040	0.015
150	0.040	0.015
160	0.040	0.015
170	0.040	0.015
180	0.040	0.015

#500 Series Bushing (HB)

Standard Metric Sizes

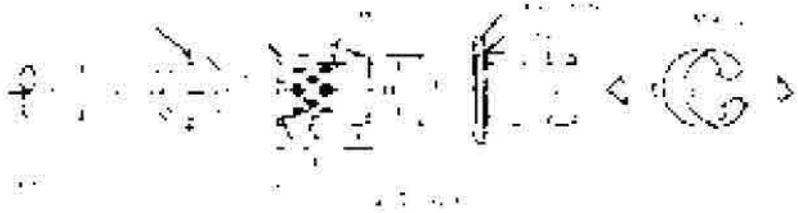
(unit: mm)

Part Number	Dimension			Applicable Washer
	I.D.	O.D.	Length	
HB-607450	60	74	50	TW-60
HB-607460	60	74	60	TW-60
HB-607470	60	74	70	TW-60
HB-607480	60	74	80	TW-80
HB-607530	70	75	30	TW-60
HB-607535	60	75	35	TW-60
HB-607540	60	75	40	TW-60
HB-607550	60	75	50	TW-60
HB-607560	60	75	60	TW-60
HB-607570	60	75	70	TW-60
HB-607580	60	75	80	TW-60
HB-6075100	60	75	100	TW-60
HB-637560	63	75	60	TW-63
HB-637570	63	75	70	TW-63
HB-637580	63	75	80	TW-63
HB-658050	65	80	50	TW-65
HB-658060	65	80	60	TW-65
HB-658070	65	80	70	TW-65
HB-658580	65	85	80	TW-65
HB-708535	70	85	35	TW-70
HB-708540	70	85	40	TW-70
HB-708550	70	85	50	TW-70
HB-708560	70	85	60	TW-70
HB-708570	70	85	70	TW-70
HB-708580	70	85	80	TW-70
HB-7085100	70	85	100	TW-70
HB-709050	70	90	50	TW-70
HB-709060	70	90	60	TW-70
HB-709070	70	90	70	TW-70
HB-709080	70	90	80	TW-70
HB-759060	75	90	60	TW-75
HB-759070	75	90	70	TW-75
HB-759080	75	90	80	TW-75
HB-7590100	75	90	100	TW-75
HB-759560	75	95	60	TW-75
HB-759570	75	95	70	TW-75
HB-759580	75	95	80	TW-75
HB-7595100	75	95	100	TW-75
HB-809640	80	96	40	TW-80
HB-809650	80	96	50	TW-80

Part Number	Dimension			Applicable Washer
	I.D.	O.D.	Length	
HB-809660	80	96	60	TW-80
HB-809670	80	96	70	TW-80
HB-809680	80	96	80	TW-80
HB-8096100	80	96	100	TW-80
HB-8096120	80	96	120	TW-80
HB-8010040	80	100	40	TW-80
HB-8010050	80	100	50	TW-80
HB-8010060	80	100	60	TW-80
HB-8010070	80	100	70	TW-80
HB-8010080	80	100	80	TW-80
HB-80100100	80	100	100	TW-80
HB-80100120	80	100	120	TW-80
HB-80100140	80	100	140	TW-80
HB-9011060	90	110	60	TW-90
HB-9011080	90	110	80	TW-90
HB-90110100	90	110	100	TW-90
HB-90110190	90	110	120	TW-90
HB-10012060	100	120	60	TW-100
HB-10012070	100	120	70	TW-100
HB-10012080	100	120	80	TW-100
HB-100120100	100	120	100	TW-100
HB-100120120	100	120	120	TW-100
HB-100120140	100	120	140	TW-100
HB-11013080	110	130	80	TW-110
HB-110130100	110	130	100	TW-110
HB-110130120	110	130	120	TW-110
HB-12014080	120	140	80	TW-120
HB-120140100	120	140	100	TW-120
HB-120140120	120	140	120	TW-120
HB-120140140	120	140	140	TW-120
HB-125145100	125	145	100	TW-125
HB-125145120	125	145	120	TW-125
HB-130150100	130	150	100	TW-130
HB-130150130	130	150	130	TW-130
HB-140160100	140	160	100	TW-140
HB-140160140	140	160	140	TW-140
HB-150170100	150	170	100	TW-150
HB-150170150	150	170	150	TW-150
HB-160180100	160	180	100	TW-160
HB-160180150	160	180	150	TW-160

#500 Series Bushing (HBN)

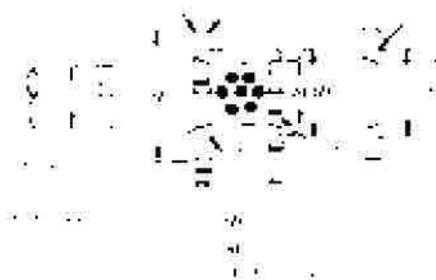
Standard Inch Sizes



Part Number	Dimension			Part Number	Dimension			Tolerances		
	I.D.	O.D.	Length		I.D.	O.D.	Length	I.D.	max (+)	min (+)
HBN-081208	1/2	3/4	1/2	HBN-283628	1-3/4	2-1/4	1-3/4	1/2	0.0013	0.0006
HBN-081210	1/2	3/4	5/8	HBN-283632	1-3/4	2-1/4	2	5/8	0.0013	0.0006
HBN-081212	1/2	3/4	3/4	HBN-283640	1-3/4	2-1/4	2-1/2	3/4	0.0013	0.0006
HBN-081214	1/2	3/4	7/8	HBN-283648	1-3/4	2-1/4	3	7/8	0.0016	0.0008
HBN-081216	1/2	3/4	1	HBN-283656	1-3/4	2-1/4	3-1/2	1	0.0016	0.0008
HBN-101410	5/8	7/8	5/8	HBN-283664	1-3/4	2-1/4	4	1-1/4	0.0020	0.0010
HBN-101412	5/8	7/8	3/4	HBN-324020	2	2-1/2	1-1/4	1-1/2	0.0020	0.0010
HBN-101416	5/8	7/8	1	HBN-324024	2	2-1/2	1-1/2	1-3/4	0.0020	0.0010
HBN-101424	5/8	7/8	1-1/2	HBN-324032	2	2-1/2	2	2	0.0020	0.0010
HBN-121810	3/4	1-1/8	5/8	HBN-324040	2	2-1/2	2-1/2	2-1/4	0.0024	0.0012
HBN-121812	3/4	1-1/8	3/4	HBN-324048	2	2-1/2	3	2-1/2	0.0024	0.0012
HBN-121816	3/4	1-1/8	1	HBN-364424	2-1/4	2-3/4	1-1/2	2-3/4	0.0024	0.0012
HBN-121824	3/4	1-1/8	1/2	HBN-364432	2-1/4	2-3/4	2	3	0.0024	0.0012
HBN-142012	7/8	1-1/4	3/4	HBN-364440	2-1/4	2-3/4	2-1/2	3-1/2	0.0028	0.0014
HBN-142016	7/8	1-1/4	1	HBN-364448	2-1/4	2-3/4	3	4	0.0028	0.0014
HBN-142020	7/8	1-1/4	1-1/4	HBN-404824	2-1/2	3	1-1/2	4-1/2	0.0028	0.0014
HBN-142024	7/8	1-1/4	1-1/2	HBN-404832	2-1/2	3	2	5	0.0033	0.0017
HBN-162212	1	1-3/8	3/4	HBN-404848	2-1/2	3	3			
HBN-162216	1	1-3/8	1	HBN-445424	2-3/4	3-3/8	1-1/2			
HBN-162220	1	1-3/8	1-1/4	HBN-445432	2-3/4	3-3/8	2			
HBN-162224	1	1-3/8	1-1/2	HBN-445440	2-3/4	3-3/8	2-1/2			
HBN-162228	1	1-3/8	1-3/4	HBN-445448	2-3/4	3-3/8	3			
HBN-162232	1	1-3/8	2	HBN-485832	3	3-5/8	2	3/4	0.0008	0.0003
HBN-162412	1	1-1/2	3/4	HBN-485840	3	3-5/8	2-1/2	7/8	0.0008	0.0003
HBN-162416	1	1-1/2	1	HBN-485848	3	3-5/8	3	1-1/8	0.0008	0.0003
HBN-162424	1	1-1/2	1-1/2	HBN-485856	3	3-5/8	3-1/2	1-1/4	0.0008	0.0003
HBN-162432	1	1-1/2	2	HBN-566632	3-1/2	4-1/8	2	1-3/8	0.0010	0.0004
HBN-202616	1-1/4	1-5/8	1	HBN-566648	3-1/2	4-1/8	3	1-1/2	0.0010	0.0004
HBN-202620	1-1/4	1-5/8	1-1/4	HBN-566664	3-1/2	4-1/8	4	1-5/8	0.0010	0.0004
HBN-202624	1-1/4	1-5/8	1-1/2	HBN-647632	4	4-3/4	2	2	0.0010	0.0004
HBN-202628	1-1/4	1-5/8	1-3/4	HBN-647648	4	4-3/4	3	2-1/4	0.0012	0.0004
HBN-202632	1-1/4	1-5/8	2	HBN-647664	4	4-3/4	4	2-1/2	0.0012	0.0004
HBN-243216	1-1/2	2	1	HBN-728648	4-1/2	5-3/8	3	2-3/4	0.0012	0.0004
HBN-243220	1-1/2	2	1-1/4	HBN-728664	4-1/2	5-3/8	4	3	0.0012	0.0004
HBN-243224	1-1/2	2	1-1/2	HBN-726680	4-1/2	5-3/8	5	3-3/8	0.0014	0.0005
HBN-243228	1-1/2	2	1-3/4	HBN-809648	5	6	3	3-5/8	0.0014	0.0005
HBN-243232	1-1/2	2	2	HBN-809664	5	6	4	4-1/8	0.0014	0.0005
HBN-283620	1-3/4	2-1/4	1-1/4	HBN-809680	5	6	5	4-3/4	0.0014	0.0005
HBN-283624	1-3/4	2-1/4	1-1/2					5-3/8	0.0016	0.0006
								6	0.0016	0.0006

#500 Series Flange Bushing (HBF)

Standard Metric Sizes



(unit: mm)

Part Number	Bushing		Flange		Length
	I.D.	O.D.	O.D.	Thick.	
HBF-1015	10	14	22	2	15
HBF-1020	10	14	22	2	20
HBF-1215	12	18	25	3	15
HBF-1220	12	18	25	3	20
HBF-1315	13	19	26	3	15
HBF-1320	13	16	26	3	20
HBF-1415	14	20	27	3	15
HBF-1420	14	20	27	3	20
HBF-1515	15	21	28	3	15
HBF-1520	15	21	28	3	20
HBF-1525	15	21	28	3	25
HBF-1615	16	22	29	3	15
HBF-1620	16	22	29	3	20
HBF-1625	16	22	29	3	25
HBF-2015	20	30	40	5	15
HBF-2020	20	30	40	5	20
HBF-2030	20	30	40	5	30
HBF-2040	20	30	40	5	40
HBF-2520	25	35	45	5	20
HBF-2525	25	35	45	5	25
HBF-2530	25	35	45	5	30
HBF-2540	25	35	45	5	40
HBF-3030	30	40	50	5	30
HBF-3040	30	40	40	5	40
HBF-3050	30	40	50	5	50
HBF-3135	31.5	40	50	5	35
HBF-3530	35	45	60	5	30
HBF-3540	35	45	60	5	40

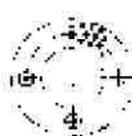
Part Number	Bushing		Flange		Length
	I.D.	O.D.	O.D.	Thick.	
HBF-3550	35	45	60	5	50
HBF-4030	40	50	65	5	30
HBF-4040	40	50	65	5	40
HBF-4050	40	50	65	5	50
HBF-4530	45	55	70	5	30
HBF-4540	45	55	70	5	40
HBF-4560	45	55	70	5	60
HBF-5030	50	60	75	5	30
HBF-5040	50	60	75	5	40
HBF-5060	50	60	75	5	60
HBF-5540	55	65	80	5	40
HBF-5560	55	65	80	5	60
HBF-6040	60	75	90	7.5	40
HBF-6050	60	75	90	7.5	50
HBF-6080	60	75	90	7.5	80
HBF-6367	63	75	85	7.5	67.5
HBF-7050	70	85	105	7.5	50
HBF-7080	70	85	105	7.5	80
HBF-7560	75	90	110	7.5	60
HBF-8060	80	100	120	10	60
HBF-8080	80	100	120	10	80
HBF-80100	80	100	120	10	100
HBF-9060	90	110	130	10	60
HBF-9080	90	110	130	10	80
HBF-10080	100	120	150	10	80
HBF-100100	100	120	150	10	100
HBF-12080	120	140	170	10	80
HBF-120100	120	140	170	10	100

#500 Series Thrust Washer (TW/TWN)

Metric and Inch Sizes

(unit: mm)

Part Number	Dimension			Fixing Screw		Thick-ness
	I.D.	O.D.	P.C.D.	Dia.	Thick.	
TW-10	10.2	30	20	M3	2	3
TW-12	12.2	40	28	M3	2	3
TW-13	13.2	40	28	M3	2	3
TW-14	14.2	50	28	M3	2	3
TW-15	15.2	50	35	M3	2	3
TW-16	16.2	50	35	M3	2	3
TW-18	18.2	50	35	M3	2	3
TW-20	20.2	50	35	M5	2	5
TW-25	25.2	55	40	M5	2	5
TW-30	30.2	60	45	M5	2	5
TW-35	35.2	70	50	M5	2	5
TW-40	40.2	80	60	M6	2	7
TW-45	45.2	90	67.5	M6	2	7
TW-50	50.3	100	75	M6	4	8
TW-55	55.3	110	85	M6	4	8
TW-60	60.3	120	90	M8	4	8
TW-65	65.3	125	95	M8	4	8
TW-70	70.3	130	100	M8	4	10
TW-75	75.3	140	110	M8	4	10
TW-80	80.3	150	120	M8	4	10
TW-90	90.5	170	140	M10	4	10
TW-100	100.5	190	160	M10	4	10
TW-120	120.5	200	175	M10	4	10



Moving Direction



(unit: inch)

Part Number	Dimension			Fixing Screw		Thick-ness
	I.D.	O.D.	P.C.D.	Dia.	Thick.	
TWN-08	1/2	1-1/2	1-1/16	1/8	5	1/8
TWN-10	5/8	1-3/4	1-5/16	1/8	2	1/8
TWN-12	3/4	2	1-1/2	1/8	2	1/8
TWN-14	7/8	2-1/8	1-5/8	3/16	2	3/16
TWN-16	1	2-1/4	1-3/4	3/16	2	3/16
TWN-20	1-1/4	2-1/2	1-15/16	3/16	2	3/16
TWN-24	1-1/2	3	2-3/8	3/16	2	1/4
TWN-28	1-3/4	3-1/2	2-3/4	3/16	2	1/4
TWN-32	2	4	3-3/16	1/4	2	5/16
TWN-36	2-1/4	4-1/2	3-5/8	1/4	2	5/16
TWN-40	2-1/2	4-3/4	3-3/4	1/4	2	5/16
TWN-44	2-3/4	5-1/8	4-1/8	5/16	2	5/16
TWN-48	3	5-1/2	4-1/2	5/16	4	3/8
TWN-56	3-1/2	6-3/4	5-1/2	5/16	4	3/8
TWN-64	4	7-1/2	6-1/4	5/16	4	3/8
TWN-72	4-1/2	7-3/4	6-3/8	3/8	4	1/2
TWN-80	5	8	6-3/4	3/8	4	1/2

#500 Series Sliding Liner (SL)



Code	Type	L	Bolt Hole				Fixing Bolt	
			a	b	c	d	Size	Qty.
SL-100A	A	100	60	-	-	-	M10	2
SL-150A	A	150	55	55	-	-	M10	3
SL-200A	A	200	55	50	55	-	M10	4
SL-250A	A	250	70	70	70	-	M10	4
SL-200B	B	200	55	50	55	-	M10	4
SL-250B	B	250	70	70	70	-	M10	4
SL-300B	B	300	65	65	65	65	M10	5
SL-350B	B	350	80	75	75	80	M10	5

Design Notes for Self-Lubricating Bearings

1. PV Value

The PV Value is a tool of measuring the performance capability of any type of bearing, where P is the bearing pressure in pounds per square inch applied to the bearing surface, and V is velocity in feet per minute on the bearing surface (surface feet per minute).

For sleeve bearings, P is approximately equal to the load on the bearing in pounds divided by the projected bearing area in square inches. The projected bearing area is approximately the length multiplied by the inside diameter of the bearing.

$$p = \frac{50,000}{3" \text{ Dia.} \times 5" \text{ length}} = 3,333 \text{ (psi)}$$

The surface speed (V) for sleeve bushings and thrust washers can be determined by the following formulas:

Sleeve Bushing

$$V = \text{RPM} \times .262 (\text{Pi} \div 12) \times \text{Shaft Diameter}$$

where RPM is shaft speed in revolutions per minute, and shaft diameter is in inches.

Thrust Washer

$$V = \text{RPM} \times .262 \times \frac{\text{ID} + \text{OD}}{2}$$

The PV value is then obtained by multiplying P x V as shown in the following sample calculation.

3" Dia. Shaft Rotating at 15 RPM, Bushing Length 5", Total Load 50,000 lbs.

$$p = \frac{50,000}{3" \text{ Dia.} \times 5" \text{ length}} = 3,333 \text{ (psi)}$$

$$V = 15 \text{ RPM} \times .262 \times 3" \text{ Dia.} = 11.79 \text{ SFM}$$

$$PV = 3,333 \text{ psi} \times 11.79 \text{ SFM} = 39,296 \text{ psi} \cdot \text{SFM}$$

Safety design of bearings means that bearings are to be designed to a lower PV value which leads to a longer service life. However, under certain conditions, the PV value can exceed the maximum allowable PV value.

Information contained in this publication should be used as a guideline for your information and verification. This information does not constitute a warranty, and we assume no legal obligation or responsibility with respect to the use of the information contained herein.

2. Bearing Life and Wear

The life of a bearing is basically dependent on the acceptable amount of wear, which is mainly affected by friction conditions. Friction is influenced by load and velocity, foreign particles, conditions of the mating material, operational temperature, different modes of operation, type of lubricant used, etc. Therefore, it may not be practical to theoretically estimate the amount of wear and life of a bearing due to the complex and harsh conditions.

Wear Amount may be estimated by the following experimental formula: $W=KPTV$, where W is Wear Amount (inch), P is Bearing Pressure (psi), V is velocity (feet per minute), T is running time (hr), K is Coefficient of Wear as specific wear amount **Experimental K values under different lubrication conditions** are given for reference as follows:

Lubrication Condition	"K" Value
No Lubrication	$831 \times 10^{-7-9}$
Boundary Lubrication Under Low Speed	$8.31 \times 10^{-9-11}$
Periodic Lubrication	$8.31 \times 10^{-9-11}$
Continuous Lubrication Under Water Application	$8.31 \times 10^{-12-14}$

If "K" value is known, the wear amount "W" for a given "T" is calculated and hence, the life of a bearing is determined from and allowable "W" of the bearing.

However, the estimated life given by the above formula should be used only as a reference because this is strictly a theoretical estimation.

3. Frictional Heat

The frictional heat (Q) generated per unit time and unit area by a self-lubricating bearing is also an important factor affecting the bearing life. The generally accepted estimation of the frictional heat is

$$Q = \frac{\mu \times P \times V}{J} = (\text{kcal}/\text{min}(\text{in}^2))$$

Where μ is coefficient of friction, J is heat equivalent of work (12.01 lbf x in/Joule), P is pressure in pounds per square inch, and V is velocity in feet per minute.

Since velocity is the main factor which limits bearing performance, the frictional heat is mainly affected by velocity rather than pressure. Therefore, for similar PV values, additional lubrication should be considered for a higher velocity application to prevent damage to the bearing or mating shaft.

4. Mating Shaft

The following recommendations apply to the mating shaft.

Application Type	Shaft Material	Hardness	Shaft Roughness
General	General Structural metal with AISI 1035 and higher strength	Rockwell "C 35" and above (higher strength material is recommended when foreign particles are present)	3-12 microns
High Temperature	Stainless steel and/or Chrome plating		
Corrosive Environment	Chrome plating		

Double to triple chrome plating of the shaft is recommended for sea water or corrosive environment applications.

Nitrification of the mating shaft effectively reduces friction for high load and/or low speed applications.

For applications above 212°F (100°C), the mating shaft dimensions should be reduced to account for the thermal expansion of the material.

Thermal Expansion = thermal expansion coefficient (a) x diameter (d) x (application temperature - ambient temperature)

** for low carbon steel = $1.12 \cdot 10^{-5}/^{\circ}\text{C}$

5. Additional Lubrication

Additional lubrication with grease or oil reduces frictional heat and wear. Also, it increases the bearing life and performance by reducing the amount of worn particles, preventing foreign particle interference (sealing effect), and reducing the noise as well as anti-rust effect of the shaft operation. Oil lubrication applied at the inner surface of a bearing in the installation stage, though no lubrication is required, it drastically reduces the wear that occurs during initial operation.

The following recommendations for additional lubrication are based on the application load and speed.

- **Low Load, High Speed:** low viscosity < 8-17 cst (110°F) spindle oil
- **Medium Load, Medium Speed:** medium viscosity < 7-15 cst (235°F) motor oil, turbine oil
- **High Load, Low Speed:** high viscosity < 100-1,000 cst (124°F) gear oil, cylinder oil

Grease containing MoS₂ (molybdenum disulfide) is highly recommended, and very effective under high load, excessive wear and high frictional heat conditions.

6. Force Fit Installation Procedure

We recommend two methods for force fit installation of bearings: press fit and shrink fit.

Press Fit Installation

1. Press the bearing into the housing with the aid of a vise or press.
2. Lubricate the bearing outer diameter to ease installation.
3. Chamfer the housing inner diameter to ease installation.
4. Contact National Bronze for proper housing diameter sizing.

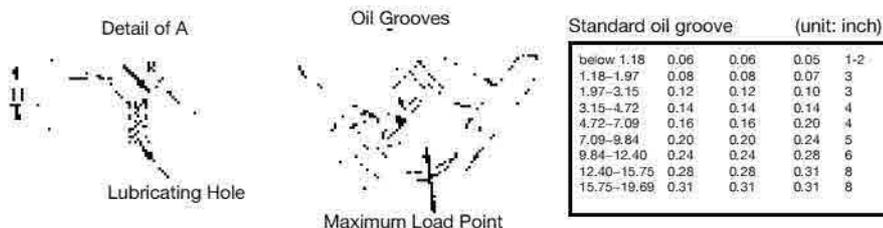
Shrink Fit Installation

1. Place bearing in liquid nitrogen bath for 10 minutes.
2. Insert bearing into housing.
3. Allow bearing to warm to ambient temperature (do not apply any heat)
4. Contact National Bronze for proper housing diameter sizing.

7. Oil Groove and Lubricating Hole Design

Oil Groove:

Distribute the oil grooves around the maximum load point as shown below. The length of an oil groove is approximately 80% of the bearing length. The radius (R and r) and depth (H) of an oil groove are selected based on the inner diameter (ID) of the bearing as shown in the table below. Use a circular oil groove on the inner surface of a housing or the outer surface of the bearing when oil is supplied from outside the housing.



Lubricating Hole:

One hole is recommended at the place where the load is not concentrated. Two holes on each side of the maximum load point are suggested for rotational motion. Use two holes along the length of each groove for longer bearings.

Brass and Bronze Standard Casting Alloys Chart of Specifications

Specifications

Nominal Chemical Compositions

Mechanical Properties

Family	CDA 1970	ASTM 1972	SAE 1972	SAE Superseded	Alloy Identification	Federal 1967	Military Current	Military Superseded	AMS	CU%	SN%	PB%	ZN%	MP%	FE%	AL%	Others%	Tensile Strength		Yield Strength		Elongation		Brinell Hardness 10MM-500KG Typical	Compression Strm. P.S.I.-.001" set	IMPACT Strn. Izod-R Lbs.	Weight Lbs. per Cu.In.	Machinability free cut YB-100	REPORTED USES		
																		Min (ksi)	Typ (ksi)	Min (ksi)	Typ (ksi)	Min (%)	Typ (%)								
Redbrass	833				131					93	1-1/2	1-1/2	4						32	10	35	35			.318	35	Electrical Hardware Parts				
	836	B145-836	836	40	115	QQ-C-390(B5)	C-22229 Gr2	B-16444GrA	4855B	85	5	5	5						30	37	14	17	20	30	50-65	14,000	9	.318	84	General Miscellaneous, Low-pressure Valves & Fittings, Pumps	
	838	B145-838	838		120	QQ-C-390(B4)		B-16540 GrC		83	4	6	7						29	35	12	16	15	25	50-60	11,500		.312	90	General Free Machining Alloy, Low Pressure Fittings, Hardware	
Semi Redbrass	844	B145-844			123	QQ-C-390(B2)				81	3	7	9						29	34	13	15	18	26	50-60		6-10	.314	90	Plumbing Fittings, Faucets, Hardware & Ornamental Castings	
	848	B-145-848			130	QQ-C-390(B1)				76	3	6	15						25	36	12	14	15	30	50-60	12,800		.310	90	Plumbing Fittings, Faucets, Stops & Wastes, Hardware	
Yellow Brass	852	B-146-852	852		400	QQ-C-390(A4)		B-17668 Gr2		72	1	3	24						35	38	12	13	25	35	40-50	8,000		.305	80	Plumbing Fixtures & Fittings, Andirons & Ornamental Castings	
	854	B-146-854	854	41	403	QQ-C-390(A3)		B-17668 Gr1		67	1	3	29						30	34	11	12	20	35	40-60	9,000		.305	80	Plumbing, Furniture, Hardware & Ornamental Fittings	
	857	B146-857			405-2	QQ-C-390(A2)	C-15345 Gr3	B-17511A GrA		63	1	1	34.7			.3			40	50	14	18	15	40	75			.304	80	Plumbers Flanges, Fittings, Ornamental, Hardware & Ship Trim	
Manganese Bronze	862	B-147-862	862	430A	423	QQ-C-390(C4)	C-22229 Gr9	B-16522 Gr2		64*			Rem. 26		3	4			90	95	45	48	18	20	170-195	50,000		.288	30	Brackets, Shafts, Gears & Structural Parts	
	863	B147-863	863	430B	424	QQ-C-390(C7)	C-22229 Gr8	B-16522 Gr1	4862B	63*			Rem. 25		3	6			110	119	60	83	12	18	225	60,000	15	.283	8	Screw Down Nuts, Slow-speed Heavy Load Bearings Gears, Gibs & Cams	
	865	B147-865	865	43	421	QQ-C-390(C3)	C-22229 Gr7	B-16443 Gr1	4860A	58	.5		40		1	1	MN-.25		65	71	25	28	20	30	130	24,000	20-40	.301	26	Strength Appls., Propellers for Salt & Fresh Water, Machinery Parts substituting for Steel & Malleable Iron	
Copper-Silicon	872	B198-872	872		500	QQ-C-390(X2)	C-22229 Gr4			Rem.	1Max.		5 Max.	1.5 Max.	2.5 Max	1.5 Max	Si 4		45	55	18	25	20	30	85			.302	40	Corrosion Brazing & Welding Applications Substitute for Tin-zinc Bronzes	
	875	B198-875	875		500	QQ-C-390(X1)				82 Rem.		.5 Max.	14				Si 4		60	67	24	30	16	21	120-135			.299	50	Corrosion, Brazing & Welding Applications Substitute for Tin-zinc Bronzes	
Tin Bronze	903	B143-903	903	620	225	QQ-C-390(D5)	C-22229 Gr1	M-16576 GrA		88	8		4						40	45	18	21	20	30	60-75	13,000		.318	30	Bearings & Bushings Pump Impellers, Piston Rings, Pump Bodies, Valves, Steam Fittings, Gears	
	905	B143-905	905	62	210	QQ-C-390(D6)			4845D	88	10	.3 Max.	2						40	45	18	22	20	25	75	13,000	10-14	.315	30	Bearings & Bushings Pump Impellers, Piston Rings, Pump Bodies, Valves, Steam Fittings, Gears	
	907		907	65	205					89	11	.5 Max.	.5 Max.						35	44	18	22	10	20	80	13,000	10-14	.317	20	Worm Wheels & Gears, Bearings for Heavy Loads & Relatively Low Speeds	
Leaded Tin Bronze	922	B143-922	922	622	245	QQ-C-390(D4)	B-16541			88	6	1.5	4.5						34	40	16	20	22	30	60-72	12,000	11-18	.312	42	Medium-pressure Hydraulic & Steam to 550°F. Marine & Ornamental Castings	
	923	B143-923	923	621	230	QQ-C-390(D3)	C-15345 Gr10	B-16540GrAorB		87	8	1 Max.	4						36	40	16	20	18	25	60-75	9,000	12	.317	42	High-pressure Hydraulic & Steam Equipment, Structural Castings	
	926				215				4846A	87	10		2						40	44	18	20	20	30	65-80	12,000	7	.315	40	Lead Screw Nuts, Heavy-Duty Bearings, Pump Pistons	
	927		927	63	206					88	10	2	.7 Max.						35	42		21	10	20	77	12,000	7-10	.317	45	Lead Screw Nuts, Heavy-Duty Bearings, Pump Pistons	
High Leaded Tin Bronze	932	B144-932	932	660	315	QQ-C-390(E7)	C-15345 Gr12	B-16261 GrVI		83	7	7	3						30	35	14	18	12	20	60-70		6	.322	70	General Purpose Bushings, Washers, Non-pressure Applications	
	934				310	QQ-C-390(E8)	C-22229 Gr3	B-16261 GrII		84	8	8	.7 Max.						25	32		16	8	20	55-65		5	.320	70	Bearings & Bushings	
	935	B144-935	935	66	326	QQ-C-390(E9)				85	5	9	1	.5 Max.					25	32	12	16	8	20	55-65	13,000		.320	70	High Speed, Light Load Bushings Mild Acid Applications	
	937	B144-937	937	64	305	QQ-C-390(E10)			4842A	80	10	10		.7 Max.					25	35	12	18	8	20	55-70	13,000	5	.320	80	High Speed, Heavy-pressure Bushings, Acid-resisting to Sulphite Fluids	
	938	B144-938	938	67	319	QQ-C-390(E6)		B-16261 GrIV		78	7	15		.75 Max.					25	30	14	16	10	18	50-60	12,000	5	.334	80	Low Friction, Moderate Pressure Bushings, Railroad Applications, Acid Resisting	
	943	B144-943	943		322	QQ-C-390(E1)		B-16261 GrV	4840A	70	5	25		.7 Max.					21	27		13	7	10	42-55	11,000	5	.336	80	High Speed, Light to Medium Pressure Bushings, Railroad & Soft Metal Applications	
Aluminum Bronze	952	B148-952	952	68A	415A	QQ-C-390(G6)	C-22229 Gr5	B-16033 GrI		88					3	9			65	80	25	27	20	35	110-140	27,000	35	.276	50	Gun Mountings & Slides, Landing Gear Parts, Pickling Tank & Mild Alkali Appls., Marine Engine & Propellers	
	953	B148-953	953	68B	415B	QQ-C-390(G7)		B-16033 Gr2		89					1	10			65	75	25	27	20	140	20,000	20	.272	55	Gears, Cams, Stripper Nuts, Slippers, High Temperature Applications, Mining Machine Parts		
	954	B148-954	954		415C	QQ-C-390(G5)	C-15345 Gr13	B-16033 Gr3	48708 48728	85					4	11			75	85	30	35	12	18	140-170		14	.269	60	Spur & Low-speed, Heavily Loaded Worm Gears, Nuts Pump & Landing Gear Parts	
	955	B148-955	955		415D	QQ-C-390(G3)	C-22229 Gr8	B-16033 Gr4		81					4	4	11			90	100	40	44	6	12	180-200		13	.272	50	Used under extreme conditions such as Tank Gun Recoil Mechanisms & Landing Gear Parts
	958				415D	QQ-C-390(G8)		B-21230Gr1 B-23921		81					5	4	9	MN 1		85	95	35	38	18	25	150-170		20	.276	50	Propeller Hub, Blades & Other Parts - Including Valves, in Contact with Sea Water
Copper Nickel	962	B369-962	962				C-20159 Gr2			88.6					10	1.4			45	49	25	29	20	36	90-100			.323	10	Component Parts of Hems Being Used for Sea Water Corrosion Resistance	
	964	B369-964				QQ-C-390(X9)	C-20159 Gr1			69.1					30	.9			60	68	32	37	20	28	120-140			.323	20	Valves, Pump Bodies, Flanges, Elbows Being Used for Sea Water Corrosion Resistance	
Nickel Silver	973	B149-973			410		C-15345 Gr7			56	2	10	20	12					30	35	15	17	8	20	50-60			.321	70	Hardware, Valves, Statuary & Ornamental Castings	
	976	B149-976			412		C-17112			64	4	4	8	20					30	40	17	24	8	20	75-90			.321	70	Marine Furniture, Hardware & Ornamental Castings	
	978	B149-978			413					66	5	2	2	25					45	55	22	30	15	16	120-150			.320	60	Dairy & Food Processing Fittings, White Ornamental & Hardware	



Since 1911

Michigan's Largest Inventory

ISO 9001: 2008 Certified