

# C93200 Manganese Bronze / C932 Manganese Bronze

## C93200 (Manganese Bronze)

Chemical Composition (unless shown as range or min)

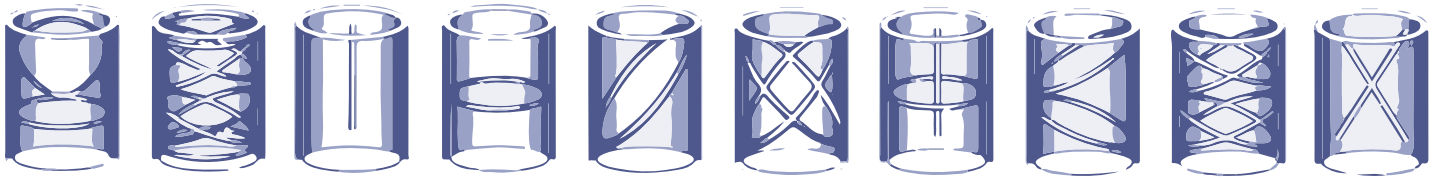
unit %	Cu(1)	Al	Pb	Fe	Pb	Ni(2)	P(3)	Si	S	Sn	Zn
min/max	81.0~85.0	max0.05	6.0~8.0	0.2	6.0~8.0	max1.0	max0.15	max0.05	max0.08	6.3~7.5	1.0-4.0
Nominal	83	/	7	/	7	/	/			6.9	2.5

(1) In determining Cu min, Cu may be calculated as Cu + Ni.

(2) Ni value includes Co.

(3) For continuous castings, P shall be 1.5%, max

Note: Cu + Sum of Named Elements, 99.1% min.



## CUSTOM MACHINED PARTS

**Grooving** When your application calls for lubrication for either the housing or the shaft, an oil or grease groove is essential. At Bronze Bearings, we can groove parts to our customer's specifications, including single loop, figure eight, double loop, double figure eight, half figure eight, straight, and circular groove patterns.



## APPLICATIONS

Straight & flange bronze standard bearings, sliding bearings, valve bushing, pump housings, water and steam fitting and much more.

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## MECHANICAL PROPERTIES:

Temper	Section Size	Cold Work	Typ/ Min	Temp	Tensile Strength	Yield Strength (0.5% ext. under load)	Yield Strength (0.2% offset)	Yield Strength (0.05% offset)	EI	Rockwell Hardness	Vickens Hard.	Brinell Hard.	Shear Strength	Fatigue Strength*	Izod Impact Strength
	in	%	/	F	ksi	ksi	ksi	ksi	%	B C F 30T	500ksi	500/3000	ksi	kai	FT-LB
	mm			C	Mpa	Mpa	Mpa	Mpa					Mpa	Mpa	J
As Sand Cast															
M01	0	0	Typ	68	35	18			20			65		16	6
	0			20	241	124			20			65		110	8
As Centrifugal Cast															
M02	0	0	SMIN	68	30	14			15						0
	0			20	307	97			15						0
As Centrifugal Cast															
M07	0	0	SMIN	68	35	20			10						0
	0			20	241	138			10						0
As Sand Cast															
M01	0	0	SMIN	68	30	14			15						0
	0			20	207	97			15						0

\*Fatigue Strength:  $100 \times 10^6$  cycles, unless indicated as  $[N] \times 10^6$ .  
unless indicated as  $[N] \times 10^6$

**NOTE: Information courtesy of Copper.org**

Product	Specification
Centrifugal	AMS 4855 ASTM B271 SAE J462 J461
Continuous	ASTM B505 SAE J462 J461
Fittings	ASME B16.15 SB62 B16.32 B16.26 B16.23 B16.18 ASTM B62 FEDERAL WW-P-460
Flanges	ASME SB62 B16.24 ASTM B62
Ingot	ASTM B30
Precision	MILITARY MIL-C-11866
Sand	AMS 4855 ASME SB62 ASTM B584 B62 SAE J461 J462
Unions	FEDERAL WW-U-516



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