MAGNOLIA
METAL CORPORATION

LARGE BEARINGS

MACHINED BLANKS
OR FINISHED TO PRINT

10675 Bedford Avenue, Omaha, Nebraska 68134

MAGNOLIA BRONZE: CAST IN STEEL

ORDER WITH CONFIDENCE, SAVE TIME, MONEY.

Magnolia semi-finished bronze bushings and bearings, cast in steel molds, are available in sizes and combinations ranging from 12" (continuous cast up to 12 1/2") to 34" O.D. By ordering Magnolia's semi-finished machined bronze to your size, you can save 15 to 35% on your purchase weight compared to the cost of rough cast bronze. Requiring only a finish cut to clean, Magnolia's bronze reduces the amount of time you spend at your machine by half, eliminating wasted time and metal in the process.

Magnolia's semi-finished or rough machined flat size parts are guaranteed to machine in your shop to your exact finished sizes. Magnolia's rough machine sizes already include an ⅛" overage on each dimension, above the finished size. When ordering Magnolia's semi-finished parts using your finished dimensions, you are guaranteed enough material to clean your requested size.

THE MAGNOLIA ADVANTAGE

QUALITY

Laboratory Tests Prove It!
CDA 936 Superior to CDA 932.

Tests conducted by a national laboratory verify that Magnolia CDA 936 consistently outperforms CDA 932 (SAE 660) under the most difficult conditions in test after test.

The bearings were run with inadequate lubrication until temperatures exceeded 400°F. Under these severe conditions, in some instances, the CDA 932 wore out three times faster than the CDA 936. In no test did CDA 932 outperform CDA 936.

Newly completed tests by a major university also prove that Magnolia's CDA 936 alloy has a significantly higher failure resistance than CDA 932. Despite testing in extreme circumstances, such as operating without lubrication, CDA 936 ran an average of 78% longer than CDA 932, and without incidents of severe shaft scoring like what occurred among the CDA 932 tests.

CDA 936 BECAUSE:

- Higher lead content gives better lubricating properties and provides better coefficient of friction. Bearings run cooler and last longer.
- Lower in zinc, CDA 936 machines 13% more freely than CDA 932.
- One and a half times as resistant to pounding.
- Acid resistant to sulphite fluids due to lower zinc, CDA 936 can be used in areas where CDA 932 would corrode.

SERVICE

Bushings For: PRESSES-MINING EQUIPMENT-MIXERS-CRUSHERS-REFINERS-RUBBER MILLS-COMPRESSORS

Whatever your bronze needs, Magnolia stands ready to respond. Maintaining a large inventory and wide range of sizes in stock enables Magnolia to act immediately in a critical delivery situation.

With the elimination of patterns, core boxes and costly rejects, your savings on replacement parts are considerable. Combine that with Magnolia's computerized costing system, upgraded machining equipment and our own foundry, and see why our prices are amongst the most competitve in the industry.

TYPICAL PHYSICAL CHARACTERISTICS

	TENSILE STRENGTH	YIELD POINT	BRINELL	ELONGATION IN 2°
CDA 936	35,000 psi	21,000 psi	65	15%
CDA 932	35,000 psi	18,000 psi	65	15%

CHEMICAL COMPOSITION

	COPPER	TIN	LEAD	ZINC
CDA 936	79% - 83%	6% - 8%	11% - 13%	,1%
CDA 932	81% - 85%	6% - 7.5%	6% - 8%	2% - 4%

MAGNOLIA BEARING BRONZE: STEEL CAST

- All Magnolia bushings are die-cast. No sand is used in manufacture. This eliminates patterns and core boxes with savings passed on to you.
- Magnolia die-cast bronze wears much longer and is far tougher and stronger than the best sand cast product. Being absolutely free of any hidden sand particles insures a longer life for your shaft.
- Because we offer full machine shop services in house at competitive prices, you can save additional machine time in your own plant, resulting in lower costs.
- The Magnolia crystal control method of die casting allows for a uniform or "isotropic" crystal structure, unlike that found in sand cast metals, while raising physical characteristics far above the requirements for similar formula sand castings.

MAGNOLIA: EQUIPMENT AND EXPERIENCE

- Large Bronze Blanks, Steel-Cast, up to 34" Body O.D.; 26 ¼" in length
- Flange bushings through 34" O.D. of flange.
- Drilling-grooving
- Sawcut halves and segments
- Split and sweat
- Windows – pockets
- Smaller Bronze Blanks, continuously cast, 1" O.D. through 12 ½" O.D.
- Order 1 to 1,000 pieces
- Washers • Rings• Rectangles/squares

THIN WALLS

Wall thickness beneath these at the right are classified as thin wall parts and require special consideration in pricing and production. Wall thickness is figured as one-half the difference between the nominal O.D. and I.D.

Standard semi-finished Nominal wall thickness

1" O.D. to 3 1/8" O.D.	¼" min.
3 ¼" O.D. to 4" O.D.	3/8" min.
4 1/8" O.D. to 12" O.D.	½" min.
12 1/8" O.D. to 26 ½" O.D.	5/8" min.
26 5/8" O.D. to 34" O.D.	¾" min.

By comparison, the minimum THINWALL nominal semi-finished wall thickness which we supply range as follows:

From 1" O.D. to 3 1/8" O.D.	1/8" minimum
From 3 ¼" O.D. to 4" O.D.	3/16" minimum
From 4 1/8" O.D. to 12" O.D.	¼" minimum
From 12 1/8" O.D. to 26 ½" O.D.	1/2" minimum
From 26 5/8" O.D. to 34" O.D.	5/8" minimum

LEAD-FREE BRONZE B-1 BRONZE!
Resolve your lead concerns the easy way with our B-1 Bronze. It's the best alternative.

MAGNOLIA GUARANTEE
NO REJECTS

Magnolia Bronzes are guaranteed to be free from all defects. In Magnolia Bronze, there are no blow-holes, no sand spots, no segregated elements, no flaws . . . no under-surface faults of any kind to cause rejection.

In accordance with industry practices, this guarantee is limited to free replacement of material returned. Magnolia's quality control procedure has resulted in returns of less than ½ of 1% of all bronze shipped over the last 10 years. This standard of excellence, combined with our special alloy and our unique casting process, assures you of the best possible value in bearing bronze.

METAL ALLOWANCES:

Inside Diameter:

Up to 7" . . . . . - 1/16" (1/32" cut)
7 ⅛" I.D. and over . . . . . - ⅛" (1/16" cut)

Outside Diameter:

Up to 8" . . . . . + 1/16" (1/32" cut)
8 ⅛" O.D. and over . . . . + ⅛" (1/16" cut)

Bars ordered rough-machined to exact sizes specified for special manufacture are machined to + or - 1/32" all over and are referred to by us as "machined to or flat sizes."

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SINCE 1886

MAGNOLIA ALSO MAKES:

- Continuous Cast Bronze up to 12 ½" O.D. Lengths up to 144"
- Completely finished bronze parts from 1" to 34" O.D.
- Lead and tin-base babbitts

SPECIAL ALLOYS:

Magnolia also casts and carries CDA 937 (Cert 64), #120 High Lead Bronze (20% lead) similar to an SAE 67 Alloy, AA Hard or CDA 903, SAE 63 and C93200. In addition to these standard alloys, Magnolia is capable of casting most tin bronzes and leaded tin bronzes on a special order basis. We will gladly quote promptly.

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