

## HANGER BEARING GENERAL INFO

ARGUTO	See Wood.
BABBITTED	Hot melted babbitt solidified on ID of Grey Iron Casting Max. hardness of Grey Iron housing is Rockwell B80 Style 220/226--Stock sizes 1-1/2", 2", 2-7/16", 3", 3-7/16" Other sizes not practical. Style 216/230--Stock sizes 1-1/2", 2", 2-7/16", 3" *See also SOLID BABBITT.
BALL BEARINGS	Anti-Friction brgs for Style 260/270 Hanger frames. Preferred when moving pellets or granule matl. Stock sizes 1-1/2", 2", 2-7/16", 3", 3-7/16"
BRONZE	SCC stock bearings made from Alloy 600 cstgs. Melting point 1550 deg F. Will withstand most any temp that lubricant will stand.  Style 220/226--Stock sizes 1", C501-1/2", 2", 2-7/16", 3", 3-7/16" Other sizes can be machined from cored bar. Style 216/230--Stock sizes 1-1/2", 2", 2-7/16", 3", 3-7/16" Other sizes N/A
BRONZE OILITE	Oilite Bushing pinned in stock bronze castings.  Style 220/226--Stock sizes 2", 2-7/16", 3" Other sizes can be made up special. Style 216/230--Can make 1-1/2" - 3-7/16" Other sizes N/A
CELAZOLE PBI	Retains mechanical properties up to 400Deg F Check Internet for other info.
CERAMIC	See ENDURO BEARINGS
COAST METAL	Spl purchase 1/8in th wall Half Bushings and fit into an annealed Hard Iron Brg Casting. (Heat & cool slowly overnight so they can be bored for bushing) Available in same sizes as Hard Iron Brgs if the required Coast Metal bushing size is available.

## DELRIN

Style 220/226-- can machine any size from delrin rod  
Style 216/230-- not practical except for grey iron casting  
with delrin bushing pinned in.  
Max. temp. 200 deg F. Moisture resistant, Machines like brass

## ENDURO

Nilcra Zirconia by Advanced Ceramics  
Reduces Metal Pickup & Galling, increasing shaft life, hard and tough  
Very high Abrasion Resistance Good for hot, abrasive dust, cement, coal  
Tensile similar to steel, Higher thermal stability than plastics, metal  
Chemically inert, 4X compressive strength of mild steel  
Reduced noise or tendency to squeal  
220/226--available  
216/230--available 1-1/2" thru 3-15/16"  
Use bottom half only - with a Hard Iron Top Half

## GATKE

#113 Normal Temp 250deg F max., #125 Laminated Fabric bearing for  
Hi-Temp applications. #397 = Range -80deg to 550 deg F.  
Food grade. Used often in sugar industry.  
220/226--Stock sizes 1", 1-1/2", 2" 2-7/16", 3", 3-7/16"  
216/230--Stock sizes 1-1/2, 2", 2-7/16", 3, 3-7/16"  
\*Asbestos content was replaced years ago.

## GRAPHALLOY

Brand name for a Purchased Bearing made of a combination  
of various metals & graphite (not a bronze bearing).  
Self-lubricated. 400deg - 750deg F. Low co-efficient of  
friction. High loads, Will not cold flow as plastics do.  
Corrosive-resistant. Will not expand or seize shaft.  
Vendor's std dimensions will not suit our hanger frames.  
Vendor will make to our dimensions, but check lead time.

We have substituted stock bronze bearings with a Graphalloy  
bushing on occasion. Must specify type of Graphalloy.

**GRAPHITE-PLUGGED BRONZE --Discontinued due to lack of source for**  
graphite paste. (Std bronze brg was drilled & plugged with  
Graphite Epoxy Resin. Graphite Flash point 285 deg F)  
Could offer Bronze-Oilite-Bushed Bronze Bearing

## HARD IRON

Purchase White Iron Castings and grind I.D. as necessary.  
Good up to 500deg F. Hardness 37RC-41RC  
Not machinable. Even very light cuts are expensive & impractical.  
*(Casting is annealed in oven overnight when machined to accept sleeves such as Stellite, etc.-- Hardness of the bearing is affected)*

220/226--Stock sizes 1, 1-1/2, 2, 2-7/16, 3, 3-7/16, 3-15/16, 4-7/16  
Odd sizes -- offer Manganese bearing or Meehanite  
Stock Drilled & Tapped for Lube in Sizes 1-1/2, 2, 2-7/16, 3  
216/230--Stock sizes 1-1/2, 2, 2-7/16, 3, 3-7/16, 3-15/16  
Also stock 2" & 3" sizes, unique csgt, drilled for lube & painted green

Note: Stock castings, if available, can be used to furnish 1-15/16",  
2-1/2" 2-15/16" bore bearings.

## HASTALLOY C

Resistant to extreme heat. Hard to machine.

220/226--Buy cored bar, machine to size, must be split in Maints Dept  
216/230-- Not available

## IPM 4900

Equal to Rulon 641, but cheaper & more readily available.  
15% mineral filled  
White in color. 220/226 Machined from bar.  
216/230 not avail.

## MANGANESE

Purchased bearings imported by Allied-Locke up through 2004.  
When present supply expires, will no longer be available in USA.  
Was available 1-1/2" thru 4-7/16" in both 226 and 216/230  
Max. Oper temp 600 deg.F. Suppose to run at higher speeds w/o squeal  
Cannot drill & tap for lube at Winona. Work Hardens up to 660 BHN

## MANGANESE BRONZE

220/226--Buy cored bar & machine to size.  
216/230--Not available unless manganese bronze bushing  
is pinned in Grey Iron casting.

## MEEHANITE

Hard Material with rough surface.  
Machinable.  
220/226--Buy cored bar slightly oversize & machine  
to size. (usually 12" randoms)  
216/230--Not available unless meehanite bushing pinned  
in Grey Iron casting. (Note: Grey Iron softer than Meehanite)

## MELLAMINE

Glass-cloth High Strength material. High Arc & Heat Resistance  
Favored by Sugar industry. GREY in COLOR  
Max Oper temp 140deg C (284 deg F.)

220/226--Buy cored bar & machine (limited sizes available)  
216/230--Not available unless mellamine bushing pinned in  
Grey Iron casting.

1.5"

2.

<b>MICARTA</b>	<p>Available in various grades:      Note: Some sizes stocked in Visalia!</p> <p>LE--more expensive grade for water application</p> <p>CE--general purpose grade</p> <p>Visalia generally uses Grade 91, Color tan, Cotton Cloth , Self-lubricatin</p> <p>Useful where Impact Strength is required.</p> <p>220/226--buy cored bar &amp; machine to size</p> <p>216/230--have furnished solid micarta in multiples of 2 bearings.</p> <p>Long Lead time.. More economical to furnish Micarta bushing pinned in Grey Iron Casting.</p> <p>(Order should specify "solid" Micarta or "Bushed"</p> <p>*Have substituted Ryertex before.</p>
<b>NI-HARD</b>	<p>Hard castings purchased &amp; ground on ID    Hardness=RC 53-55</p> <p>Cannot machine here.</p> <p>SCC patterns returned to Winona in 2001 due to low volumn sales.</p> <p>Offer manganese if prior stock has been depleted....</p>
<b>NYLATRON</b>	<p>Molded from Std. "Nylatron GS". Have precise amounts of molybdenum disulfide (grease) added to type 66 Nylon to produce a moly-filled nylon.    Grey color.</p> <p>220/226--Stock sizes 1-1/2", 2, 2-7/16, and 3"</p> <p>216/230--Special Purchase</p>
<b>NYLATRON NSM</b>	<p>As above, but advertised to increase part life 5X....</p>
<b>NYLON</b>	<p>Molded from natural 101 Nylon. F.D.A. approved for food.    White</p> <p>Max. temp 200 deg F</p> <p>220/226--Stock 1-1/2, 2, 2-7/16, 3, 3-7/16</p> <p>216/230--Special purhcase (1-1/2" no longer available)</p>
<b>NYLON MC-901</b>	<p>Harder than UHMW but machines well., Heat stylized.</p> <p>Good up to 260 deg F.      COLOR: Blue</p> <p>220/226--buy cored bar &amp; machine to size.</p> <p>216/230--not avail unless we bush a Grey Iron Cstg</p>
<b>NYLON TEFLON-FILLED</b>	<p>See Teflon-Filled Nylon</p>
<b>OLDSALLOY</b>	<p>Brand name for brg made by Oldsalloy Co, Los Angelos</p>
<b>PLASTECH</b>	<p>Engineered Nylon resin, Food Grade, Injection Molded</p> <p>Good for -60deg F to +300 def F., Built in lubricant</p>

<b>POLYETHYLENE</b>	<p>Hi Density, UHMW (Ultra High Molecular Wght)          Good for 225 deg F Food Grade .. Natural Color.          Purchase complete</p> <p>220/226--Stock sizes 1-1/2, 2, 2-7/16, 3, 3-7/16, 3-15/16          Other sizes can be machined from purch. Bar          216/230--Special Purchase</p>
<b>RULON</b>	<p>Dixon Trade name for family of reinforced proprietary PTFE compounds.          Known for high compressive strengths, low coefficient of friction, excellent          Abrasion resistance, corrosion resistance, while running without lubrication.          Absence of erratic low speed motion...</p>
<b>RULON AR</b>	<p>The original rulon. First commercially available PTFE          Fillers are ceramic in nature. Mating surfaces should be RC 35 or harder.          Color: Maroon</p>
<b>RULON LR</b>	<p>Modified Rulon AR to increase load capacity with decrease in flexibility.</p>
<b>RULON J</b>	<p>All-plastic Reinforced PTFE.. Lowest coefficient of Friction of any          PTFE. Good for running in non-ferrous &amp; non-metallic mating surfaces          such as Brass, other plastics, and T316 S/S          Not good for alkaline solutions or Oxidizing acids.          Wear resistance is 1000x better than unfilled TFE.          High priced brg. (could cost from \$300 to \$900 or more)          COLOR: Dull Gold          220/226-- buy cored bar &amp; machine to size          216/230--Not available</p>
<b>RULON 641</b>	<p>Cast acrylic, White, for Food &amp; Drug, FDA approved, shatterproof          See IPM 4900 (Rulon 641 has very long lead time and is very expensive)</p>
<b>RYERTEX</b>	<p>Plastic-type similar to Micarta          220/226--buy cored bar &amp; Machine to size          216/230--Not available unless bushing is pinned in Grey Iron Cstg</p>
<b>SOLID BABBITT</b>	<p>Poured into mold. Not into casting.          Available only style 220/226 -- 1" bore part #194-0140</p>
<b>STELLITE-BUSHED</b>	<p>Stellite #6B Half Bushings 1/8"th are welded in Hard Iron Casting          that has been annealed (Heat cstg in oven, cool slowly overnight,          then bore for bushing) Hardness of bushing=Rockwell C37          Stellite 6B is for extreme conditions of wear, abrasion, heat          High Hardness at high temps. Non-galling. Low Coefficient of friction.          Recovers full hardness after exposure to temps up to 2000deg F          Resistant to oxidation, corrosion, thermal shock, heat checking          Available in same sizes as Hard Iron Beairngs.          Due to Cobalt content, stellite vendor will not publish stable prices..</p>

<b>SYNTHANE</b>	<p>Synthane-Taylor went out of business. Substitute:  Cotton Base Fabric Phenolic CE-3492  Low shrinkage, good wear, resistant to long term moisture exposure.  Max. oper temp 300deg F short time, 250 deg F continuous  Compressive strength 22,000psi Tensile 9000, hardness Rockwell M 98  Favorite of sugar industry  220/226--buy bar &amp; machine into bearing  216/230--Not available except as bushing in Grey Iron Cstg</p>
<b>TEFLON</b>	<p>Max Oper Temp 500 deg F.  Has the lowest coefficient of friction range of any bearing material.  220/226--Buy cored bar &amp; machine to size.  216/230--Not available</p>
<b>TEFLON-(FIBER GLASS IMPREGNATED)</b>	<p>220/226--Buy cored bar &amp; machine to size  216/230--Not available</p>
<b>TEFLON-FILLED NYLON</b>	<p>Oper temp -40deg to 180deg F.  Not FDA approved  Purchase special when available  (Some sizes discontinued unless ordered in large quantities)</p>
<b>THORDON</b>	<p>Purchased polymer bearing (See A4225, 1-1/2" was \$76  Non-Metallic, long-life bearings for marine, offshore oil rig, pump, hydroelectric  Withstands high shock loads, abrasive-resistant, eliminates oil or grease</p>
<b>TORLON</b>	<p>High Performance Plastic at High Temperature  Withstands continuous exposure up to 500deg F  TS 26,900 PSI @73deg 15,200@300deg F  Electrical insulation superior at High Temp  Resistant to Radiation &amp; Most chemicals  Tradename of Amoco Chemicals Corp  (Note: 4-7/16" brg made from Torlon \$3500 in 1993)  Available in Grade 4203 or 5030 w/30% glass fiber</p>
<b>TUFF-METAL</b>	<p>available as rough castings from Pacific Alloy Castings  South Gate, CA Grind ID</p>
<b>TUNGSTEN CARBIDE</b>	<p>No quote</p>
<b>TURCITE</b>	<p>Discontinued brg matl previously made by W.S. Shamban  in Newbury Park, CA They recommended substituting DELRIN</p>
<b>UHMW</b>	<p>See Polyethylene</p>

WEARITE	A nylon bearing, self-lubricated, good for -60deg to +300 deg F Furnished by Maxi-Lift. Some complain if they get wet, they swell & squeal. Injection Molded, Industrial Grade Nylon resin
WEB-LOY	White Iron bearings at Webster Foundry. Density .260-.280 lbs/SqIn Tensile 50,000PSI Brinell 350 Min.
WHITE IRON	See Hard Iron.
WOOD	Rock Maple Oil-Impregnated (with blend of oils & waxes, non-toxic) Bore is normally across grain so that matrix of tubular cells form continuous pipelines for lubricant to meter to load bearing area under friction. As friction reduces & interface cools, lubricant is reabsorbed. Tolerates higher shaft speeds than UHMW, Nylon101, or Delrin. Will not cold flow or distort under heavy loads. Not good for submerged or water applications.. Good for slurries, grains, & chemicals..Moderately abrasive resistant. (The steel pin has been replaced with shouldered Nylon pin) Max. oper temp 160 deg F. 220/226-- Stock 1", 1-1/2", 2", 2-7/16", 3", 3-7/16" 216/230--Stock sizes 1-1/2, 2, 2-7/16, 3, 3-7/16
28-B	Old Style hanger, Brgs interchangeable with 226

Filename: brgbook.xl 9/7/05  
Please contact LaVerne Palmertree if information changes or to add new info.