Alro Steel
Metals • Industrial Supplies • Plastics

One Stop Shopping

The Complete Source for all Your Hydraulic Cylinder Metals Needs!

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If you are looking for extended cylinder life without additional cost try Stelmi® America’s **Chrome Plated Bars** available through Alro Steel.

Stelmi® America’s unique process provides a cost-effective, premier product offering superior corrosion resistance, uniformity of plate thickness and impeccable size accuracy.

### Stocking Grades & Sizes

#### Standard Chrome Plated Round Bars
(With a 75k minimum yield and .0005 minimum chrome plated thickness)

**Diameters Stocked**
- 1" 1-1/8" 1-1/4" 1-3/8" 1-1/2" 1-5/8" 1-3/4" 2"
- 2-1/4" 2-1/2" 2-3/4" 3" 3-1/2" 4" 4-1/2" 5"  

#### Induction Hardened Chrome Plated Round Bars
(With a 100k minimum yield and .001 minimum chrome plated thickness)

**Diameters Stocked**
- 1" 1-1/8" 1-1/4" 1-1/2" 1-3/4" 2" 2-1/4"
- 2-1/2" 2-3/4" 3" 3-1/4" 3-1/2" 3-3/4" 4"

### Grades

Standard: 1045 with 75,000 PSI min. yield strength  
.0005 min. Chrome-Plated thickness

Induction Hardened: 1045/1050 with 100,000 PSI min. yield strength  
.001 min. Chrome-Plated thickness

Alloys and higher strength steels are available

### Lengths

16 ft to 24 ft lengths or to your specification

### Induction Hardening

50 Rc minimum surface hardness or to your specification

### Chrome Plate Thickness

0.0005 inch per side minimum, also available to your specification  
Stelmi process gives superior uniformity of plate thickness, plating to end of bars

### Chrome Plate Hardness

67 to 72 HRc

### Chrome Plate Surface Finish

16 Ra maximum

888-888-ALRO
Lower your costs and improve your productivity with Dura-Bar® Continuous Cast Iron Bars.

By using Dura-Bar® you will be able to increase your profit margins by machining more parts per hour, decrease your cycle time and increase your productivity ...

...PLUS Optimize your machining speeds and feeds
...PLUS Lower your tooling costs by maximizing tool life
...PLUS Decrease downtime for tooling changes
...PLUS Reduce scrap by using a defect-free material

Together, it all adds up to a lower total cost per part.

Dura-Bar® Available Grades & Sizes

<table>
<thead>
<tr>
<th>Grade</th>
<th>Rounds</th>
<th>Rectangles</th>
<th>Squares</th>
<th>Tubes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray Iron (G2)</td>
<td>5/8&quot; to 25&quot;</td>
<td>3/4&quot; x 1-1/2&quot; to 13-1/2&quot;</td>
<td>1-1/2&quot; to 12-1/4&quot;</td>
<td>3-1/2&quot; x 1-1/2&quot; to 9&quot; x 7&quot;</td>
</tr>
<tr>
<td>Gray Iron (G1A)</td>
<td>2&quot; to 6&quot;</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Ductile Iron (65-45-12)</td>
<td>1-1/4&quot; to 25&quot;</td>
<td>1-1/2&quot; x 2-1/4&quot; to 18-1/2&quot; x 22&quot;</td>
<td>3-1/4&quot; to 12-1/4&quot;</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2&quot; x 2&quot; to 11&quot; x 11&quot; (4-side Milled)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ductile Iron (80-55-06)</td>
<td>1-1/4&quot; to 25&quot;</td>
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<td>---</td>
</tr>
<tr>
<td>Ni-Resist</td>
<td>1&quot; to 6&quot;</td>
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</tr>
</tbody>
</table>

Other Grades and Sizes available upon request

Gray Irons
Dura-Bar’s three standard grades of gray iron combine good strength, close-grain structure and good machinability. G-2, with its pearlitic microstructure, is similar to ASTM A48 Class 40 iron. G-1’s partially pearlitic microstructure parallels ASTM A48 Class 30 iron, while G1A offers a ferritic microstructure.

Ductile Irons
When higher strength, toughness, ductility and hardenability are required, Dura-Bar’s 65-45-12, 80-55-06 and 100-70-02 ductile irons are available. These irons also offer improved machinability over steel.

Ni-Resist
Type 1 Ni-Resist is a non-magnetic material that is highly resistant to gaseous and liquid environments that are destructive to conventional iron and steel. Type 2 Ni-Resist is available for those applications requiring heat and oxidation resistance or freedom from copper contamination.

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CDA 932 / SAE 660 Bearing Bronze
Most commonly used bearing alloy used in applications operating at moderate loads and moderate to high speeds.
- Good wear resistance and excellent machinability
- Most economical choice alloy for general purpose bearing and wear use
- Used in many industrial, automotive, appliance, bearing and bushing applications

Aluminum Bronze (CDA 954 & 959)
Recommended for heavier duty applications involving wear, abrasion and fatigue.
- Exceptional performance in bearings, bushings and other applications where abrasion and fatigue are encountered
- High strength and excellent corrosion resistance
- Better strength and performance at elevated temperatures than 932/660

Advantages of Continuous Cast Bronze Products (932, 954 & 959)
- Can reduce shrinkage, cavities and porosity in the material
- Provides uniform grain structure which can eliminate hard spots and improve machinability
- Cast oversized to allow for finish machining to nominal dimensions

Available Grades & Sizes from Alro stock

<table>
<thead>
<tr>
<th>Grade</th>
<th>Flat Thick</th>
<th>Flat Width</th>
<th>Squares</th>
<th>Rounds</th>
<th>Hollow Bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDA 932/SAE 660 Bearing Bronze</td>
<td>1/4&quot; - 4&quot; thick</td>
<td>6&quot; - 10&quot; wide</td>
<td>---</td>
<td>3/8&quot; Dia - 12&quot; Dia</td>
<td>1&quot; OD - 16&quot; OD</td>
</tr>
<tr>
<td>Aluminum Bronze (CDA 954)</td>
<td>1/4&quot; - 1&quot; thick</td>
<td>3&quot; - 6&quot; wide</td>
<td>1/2&quot; - 6&quot;</td>
<td>3/8&quot; Dia - 11&quot; Dia</td>
<td>1&quot; OD - 9&quot; OD</td>
</tr>
<tr>
<td>Aluminum Bronze (CDA 959)</td>
<td>1/4&quot; - 1&quot; thick</td>
<td>3&quot; - 6&quot; wide</td>
<td>Inquire</td>
<td>---</td>
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</tr>
</tbody>
</table>

Additional Grades and Sizes available upon request

alro.com 888-888-ALRO
Your One Stop Shop for Metals, Industrial Supplies & Plastics

About Alro

Integrity. Loyalty. Honesty. These principals have guided Alro Steel since our founding in 1948 by brothers, Al and Robert Glick. From a small garage in Jackson, Michigan, Alro Steel has grown to over 65 locations in 12 states. Alro distributes metals, industrial supplies and plastics. A wide variety of processing services are available including cut-to-size metals and plastics with next day delivery to over 25,000 customers in North America.

Focused on exceeding our customers’ expectations, we build relationships with all our customers, large and small. To learn more, visit alro.com.

Processing Services

Saw Cutting
Precision Plate Sawing
Tube Cutting & Chamfering
Plasma Cutting
Plate Laser Cutting
6-Axis Laser Cutting
Waterjet Cutting
Precision Milling
Shearing
Plate Grinding
Thermal Processing
Plastic Processing

Alro Metals Outlet

Alro Metals Outlet locations stock a broad range of metals and plastics in a convenient retail setting. Metals Outlet specializes in small to large orders, perfect for machine shops, do-it-yourself (DIY) and maintenance departments.

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