



Alro Steel

Metals • Industrial Supplies • Plastics

Hydraulic Cylinder Metals

Stelmi® Chrome Plated Bars, Dura-Bar®
Cast Iron Bars and Bronze Bearing Metals



Hydraulic Cylinder Metals

Stelmi® Chrome Plated Bars

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"

Standard 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
The Stelmi process gives superior uniformity of plate thickness, plating to the end of bars

Chrome Plate Hardness

67 to 72 HRc

Chrome Plate Surface Finish

16 Ra maximum



Standard Tolerances

(Undersize variation only)

0.750" to < 1.500" = -0.001"
1.500" to < 2.500" = -0.0015"
2.500" to 3.000" = -0.002"
> 3.000" to 4.000" = -0.003"
> 4.000" to 5.000" = -0.005"

Hydraulic Cylinder Metals

Dura-Bar® Cast Iron Bars

"The Most Specified Brand in the Industry"

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

Grade	Rounds	Rectangles	Squares	Tubes
Gray Iron (G2)	5/8" to 25"	3/4" x 1-1/2" to 13-1/2" x 20-1/2"	1-1/2" to 12-1/4"	3-1/2" x 1-1/2" to 9" x 7"
Gray Iron (G1A)	2" to 6"	---	---	---
Ductile Iron (65-45-12)	1-1/4" to 25"	1-1/2" x 2-1/4" to 18-1/2" x 22" 2" x 2" to 11" x 11" (4-side Milled)	3-1/4" to 12-1/4"	---
Ductile Iron (80-55-06)	1-1/4" to 25"	---	---	---
Ni-Resist	1" to 6"	---	---	---

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.

Hydraulic Cylinder Metals

Bronze Bearing Metals

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

Grade	Flat Thick	Flat Width	Squares	Rounds	Hollow Bar
CDA 932/SAE 660 Bearing Bronze	1/4" - 4" thick	6" - 10" wide	---	3/8" Dia - 12" Dia	1" OD - 16" OD
Aluminum Bronze (CDA 954)	1/4" - 1" thick	3" - 6" wide	1/2" - 6"	3/8" Dia - 11" Dia	1" OD - 9" OD
Aluminum Bronze (CDA 959)	1/4" - 1" thick	3" - 6" wide	Inquire	---	---

Additional Grades and Sizes available upon request



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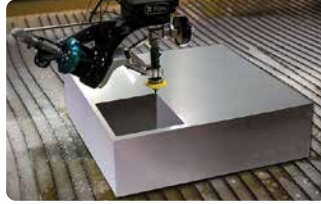
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Metals Processing



Precision Plate and Structural Saw Cutting



Waterjet Cutting



Oxy-Fuel Cutting



Plasma Cutting



Shearing



Press Brake Bending & Forming



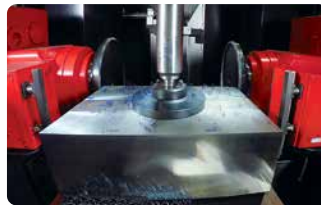
Plate Laser Cutting



6-Axis Laser Cutting



Tube Cutting and Chamfering



Super Square Precision Milling

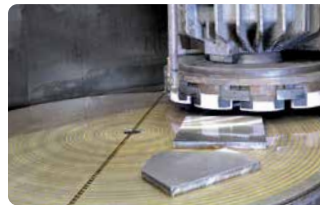


Plate Grinding



Thermal Processing



Metals & Shapes

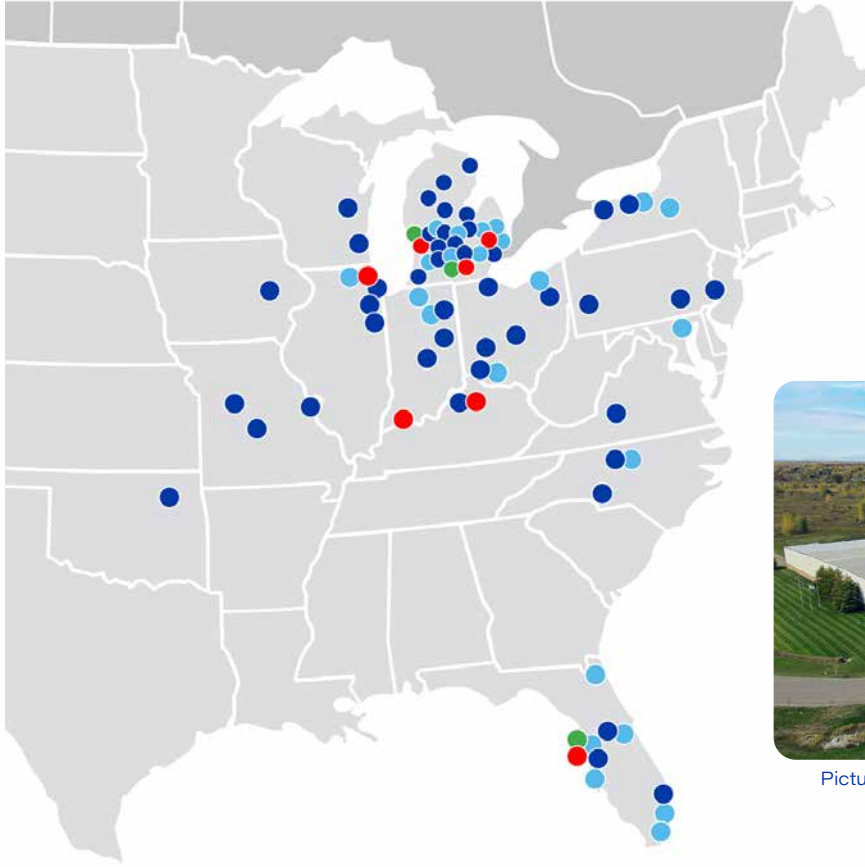
	Bar	Pipe & Tube	Plate & Sheet	Structural	Grating & Exp. Metal
Alloy	●	●	●		
Aluminum	●	●	●	●	●
Brass	●		●		
Bronze	●	●			
Carbon Steel	●	●	●	●	●
Cast Iron	●				
Copper	●	●	●		
Stainless Steel	●	●	●	●	●
Tool Steel	●		●		

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Pictured above, the Alro Steel facility in Pottsville, Michigan

Integrity. Loyalty. Honesty. These principles 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 75 locations in 15 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 50,000 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.](http://alro.com)

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