

Heavy Hollow Alloy and Stainless

Associated Steel Corp. offers an excellent selection of both alloy and stainless "heavy hollow" materials. **KROMITE® #3 Hollow Bar** and **MIR 50® Bushing Stock** are designed to provide a high degree of reliability for general maintenance applications depending upon your requirement. Our unique steels are engineered to extend service life, provide optimum performance and reduce downtime of your equipment. We offer a large stocking inventory and can cut to your exact length.

ALLOY STEEL

KROMITE® #3 HOLLOW BAR - 4140 (mod.)
Quench & Tempered, High Strength Alloy

Key Features

- Quench & Tempered • Fatigue Resistant
- High Strength • Ease of Machining & Welding
- Fine Grain Structure • Free of Hard & Soft Spots

Typical Mechanical Properties*

Hardness	269/341BHN	Elongation	19%
Tensile Strength	145 KSI	Reduction of Area	50%
Yield Strength	110 KSI	*Based on 1/2" Test Specimen	

Sizes Available*

3"OD x 1-1/2"ID	4-1/2"OD x 2-1/2"ID
3-1/2"OD x 1-1/2"ID	5"OD x 3"ID
4"OD x 2"ID	6"OD x 3-1/2"ID

*Supplied as a rough size (OD & ID); will not finish to its nominal size.

Contact our office for other sizes and configurations.
Standard lengths available are 18".

STAINLESS STEEL

MIR 50® BUSHING STOCK - (mod.) Custom 450®
Non-Galling, Corrosion Resistant PH Stainless

Key Features

- Excellent Toughness • Corrosion Resistant, Like 316
- 2X Stress Relieved • Ease of Machining & Welding
- Galling Resistance • Low Memory

Typical Mechanical Properties*

Hardness	258/294 BHN	Elongation	26%
Tensile Strength	140 KSI	Reduction of Area	65%
Yield Strength	108 KSI	*Based on 1/2" Test Specimen	

Sizes Available*

2-1/2"OD x 1"ID	5"OD x 3"ID
3"OD x 1-1/2"ID	5-1/2"OD x 3"ID
3-1/2"OD x 1-1/2"ID	6"OD x 3"ID
4"OD x 2"ID	6-1/2"OD x 3"ID
4-1/2"OD x 2-1/2"ID	

*Rough machined with allowance for proper clean-up.



General Machining Data

ALLOY STEEL

KROMITE® #3 HOLLOW BAR - 4140 (mod.) **Quench & Tempered, High Strength Alloy**

Kromite #3 Hollow Bar is a high quality, electric furnace melt, vacuum degassed, fatigue resistant alloy. This product was created to offer heavy industry a reliable material that could handle the rigors of repeated wear, torque, and flex for general purposes maintenance applications. Used in place of many of your commercial alloy grades including 4130, 4140, 4150, and 4340. Machinability rating is approximately 60%, depending on actual hardness. Typical surface hardness of this material is 269/341 BHN.

High Speed

Depth of Cut .150"

Speed 70 fpm

Feed .015 inch/revolution

Tooling C6

Carbide

Depth of Cut .150"

Speed 260 brazed, 330 throw-away

Feed .015 inch/revolution

Tooling C6 (Cutting Fluid: Soluble Oil 1:20)

Drilling

Point Angle 118°, relief 12°

Helix Angle 29° point: plan

Feed .005 inch/revolution

STAINLESS STEEL

MIR 50® BUSHING STOCK - (mod.) Custom 450® **Non-Galling, Corrosion Resistant PH Stainless**

Mir 50 Bushing Stock is a high performance, non-galling, corrosion resistant PH stainless. This product exhibits unique mechanical characteristics similar to 4140 and 4340 commercial grade metals, but with the corrosion resistance of a 316 austenitic stainless. Should be considered for applications where 304L, 316L, 410 and/or 416 stainless are currently utilized.

Use high speed tools.

Turning Single Point, and box.

Speed 70/90 fpm

Feed .015/.007 inch/revolution

Turning and Cut-off

Speed 70 fpm

Feed .015 inch/revolution

Drilling

1/4" Diameter

3/4" Diameter

Speed 50 fpm

Speed 70 fpm

Feed .004inch/revolution

Feed .0015 inch/revolution

Milling

Depth of Cut .050"

Speed 85 fpm

Feed .001/.004 inch/revolution

Tap

Speed 12/25 fpm

Note: In all cases, a certain degree of caution should be exercised when working with hardened alloys or PH stainless materials. Use equipment of sufficient capacity that is in good condition. Utilize machine operators that are properly trained and experienced in working with these materials. Appropriate safety gear should be utilized at all times.

Custom 450® is a registered trademark of Carpenter Technology Corporation.



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