

# HARDGUARD BLOCKS

CHOCKY BLOCKS, WEAR BARS, BUTTONS, DONUTS, SKIDS, EDGES, WEAR PLATES



*ISO 9001:2015 Certified*

JADCOMFG.COM



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## JADCO Manufacturing, Inc.

- > Family-owned business, established in 1980
- > Is a leading global provider of unique solutions to combat impact and abrasion challenges
- > Provides unmatched technical expertise, quality, and customer service
- > Offers an unparalleled array of proprietary products to optimize operations

### Our commitment to you:

We examine raw materials, work-in-progress, and finished goods to ensure that everything we manufacture is to your precise specifications. Our technical support team will work directly with your designers and engineers, using Autocad™ and SolidWorks®, to plan every project detail. Our design and fabrication expertise delivers genuine value to you no matter what your objective: increased tonnage, superior wear life, or reduced maintenance costs. We will take the time to understand and help solve the performance and operational challenges that you face while helping you maximize profits and productivity.



### Industries Served:

- > Mining
- > OEM
- > Material Handling
- > Asphalt and Road Building
- > Tunneling
- > Concrete and Cement
- > Oil and Gas
- > Power Generation
- > General Industrial
- > Steel Mills and Foundries
- > Pulp and Paper
- > Aggregates
- > Waste and Recycling
- > Dredging

*If you're looking for an industry that isn't listed above contact JADCO and learn more about solutions to solve your greatest wear challenges.*



## ABOUT JADCO HARDGUARD BLOCKS

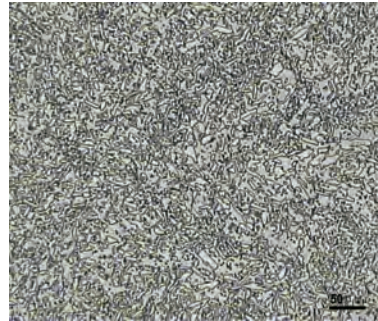
JADCO HardGuard blocks, available in a wide array of shapes and sizes, are an extremely hard, laminated bi-metallic, wear-resistant composite with chrome-moly white iron bonded onto a mild-steel backing plate. Its bonding shear strength is over 30,500 psi (or 210 Mpa) and will not separate.

To ensure that our blocks have finely dispersed microstructure and ultra-consistent properties versus most competitive brands, we conduct rigid post-bonding heat treatment. Our alloy hardness (63 HRC, at a minimum) delivers maximum abrasion protection, while the steel backing plate absorbs high impact and facilitates ease of fitting and use. We do not recommend HardGuard block applications in working temperatures over 572°F (300° C).

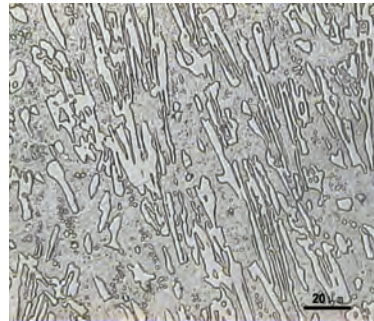
Ideally, HardGuard blocks work exceptionally well on buckets (excavator, loader, dragline, face shovel...), crusher spider arm guards, discharge chutes, rock boxes, grizzly bars on feeders/shredder/grinding mills, sugarcane knife edges, adaptors and attachments, dredging equipment, screen-feed distribution and hopper wear areas...

In addition, our blocks can be custom-designed to your exact application. Each block is quality-tested... and regularly subjected to thorough chemical, microstructure, visual, hardness, ultrasonic, and destructive examinations.

**JADCO HardGuard wear blocks** will reduce downtime and increase productivity, even in the harshest and most abrasive operating conditions.



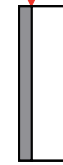
x 400



x 1260

Microstructure

Shearing Strength  
≥ 210 Mpa – 30,5000 psi



Impact Toughness  
up to 150J/cm<sup>2</sup> –  
714 FT-lb/in<sup>2</sup>



White Iron  
Hardness ≥  
HRC63/710 BN

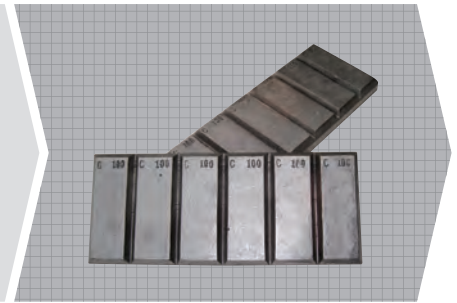


Backing  
Steel Plate

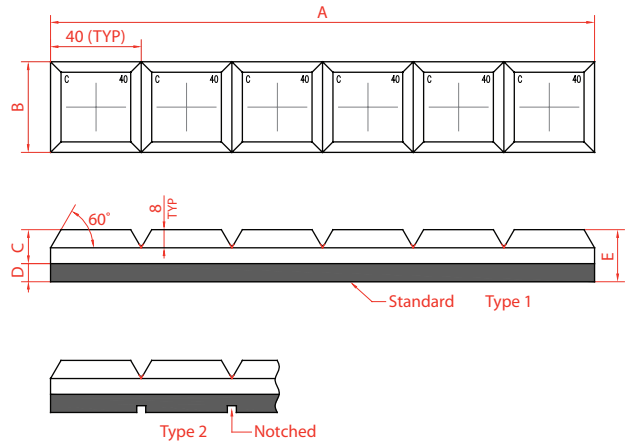
## JADCO HARDCHOC – CHOCKY BARS

Chocky bars are routinely used in the mineral processing, recycling, mining, quarrying, sugar, dredging, and earthmoving industries.

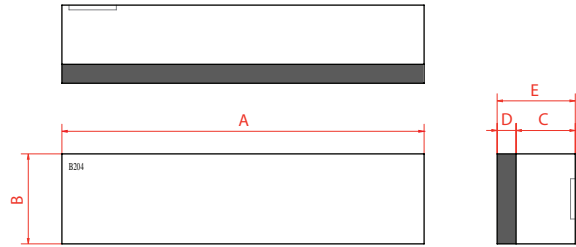
Our blocks install easily and can be (with or without grooves) bent, cut, and/or formed to your particular surface.



Part Number	Type	Size (in.)	Nominal Dimensions (in.)						Weight (lbs.)
			A	B	C	D	E	F	
C251	1	9.5 x 1 x 1	9.5	1	0.75	0.25	1		1.9
C252	2	9.5 x 1 x 1	9.5	1	0.75	0.25	1		1.9
C401	1	9.5 x 1.5 x 1	9.5	1.5	0.75	0.25	1		3.3
C402	2	9.5 x 1.5 x 1	9.5	1.5	0.75	0.25	1		3.3
C501	1	9.5 x 2 x 1	9.5	2	0.75	0.25	1		4.1
C502	2	9.5 x 2 x 1	9.5	2	0.75	0.25	1		4.1
C651	1	9.5 x 2.5 x 1	9.5	2.5	0.75	0.25	1		5.5
C652	2	9.5 x 2.5 x 1	9.5	2.5	0.75	0.25	1		5.5
C801	1	9.5 x 3 x 1	9.5	3	0.75	0.25	1		7.0
C802	2	9.5 x 3 x 1	9.5	3	0.75	0.25	1		7.0
C901	1	9.5 x 3.5 x 1	9.5	3.5	0.75	0.25	1		7.7
C902	2	9.5 x 3.5 x 1	9.5	3.5	0.75	0.25	1		7.7
C101	1	9.5 x 4 x 1	9.5	4	0.75	0.25	1		8.5
C102	2	9.5 x 4 x 1	9.5	4	0.75	0.25	1		8.5
C131	1	9.5 x 5 x 1	9.5	5	0.75	0.25	1		11.4
C132	2	9.5 x 5 x 1	9.5	5	0.75	0.25	1		11.2
C151	1	9.5 x 6 x 1	9.5	6	0.75	0.25	1		16.0
C152	2	9.5 x 6 x 1	9.5	6	0.75	0.25	1		16.0



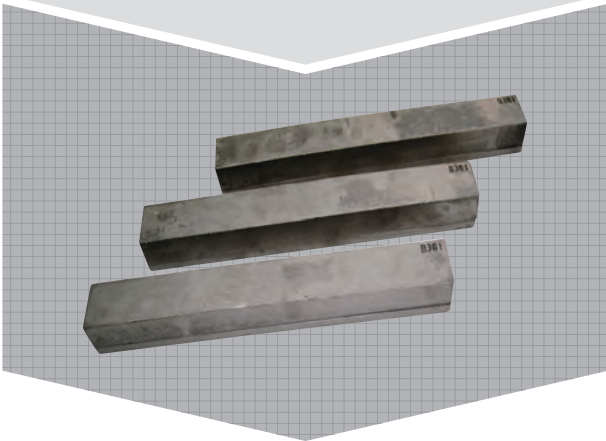
■ Indicates Standard Stock Items



## JADCO STANDARD HARDBAR

HardBars are supplied in thicknesses from 1" to 4", with widths from 1" to 11.75" – in a wide variety of lengths.

Our bars deliver superior wear life, far outlasting manganese or Ni-hard steels and other conventional alloys.



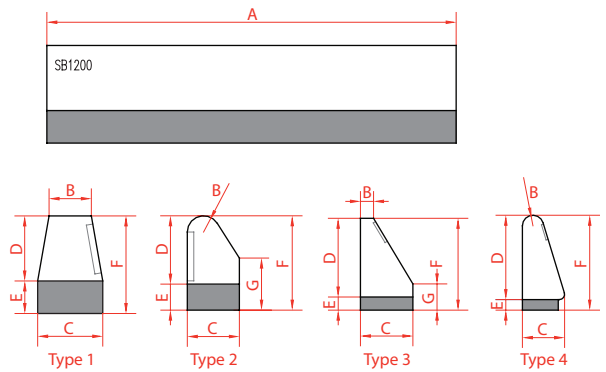
Part Number	Type	Size (in.)	Nominal Dimensions (in.)							Weight (lbs.)
			A	B	C	D	E	F	G	
B101	STD	4 x 1.25 x 1.25	4	1.25	1	0.25	1.25			1.9
B102	STD	5 x 2 x 1.75	5	2	1	0.75	1.75			5.2
B103	STD	6 x 2 x 2	6	2	1.5	0.5	2			6.3
B104	STD	6 x 3 x 1.5	6	3	1.25	0.25	1.5			7.4
B105	STD	6 x 3 x 2	6	3	1.5	0.5	2			9.7
B106	STD	6 x 3 x 2.25	6	3	1.75	0.5	2.25			11.6
B107	STD	6 x 1.5 x 1.25	6	1.5	1	0.25	1.25			3.3
B108	STD	7.5 x 2 x 1.25	7.5	2	1	0.25	1.25			4.8
B109	STD	7.5 x 3 x 2	7.5	3	1.5	0.5	2			13.4
B110	STD	7.5 x 1 x 1	7.5	1	0.75	0.25	1			2.4
B200	STD	7.75 x 1 x 1	7.75	1	0.5	0.5	1			2.2
B201	STD	8 x 2 x 0.75	8	2	0.5	0.25	0.75			3.5
B202	STD	8.25 x 2 x 2	8.25	2	1.5	0.5	2			9.0
B203	STD	9 x 2 x 2	9	2	1.5	0.5	2			9.9
B204	STD	9.5 x 4 x 2.25	9.5	4	1.5	0.75	2.25			24.2
B205	STD	11.5 x 3 x 2	11.5	3	1.5	0.5	2			20.2
B206	STD	9.75 x 2.5 x 0.75	9.75	2.5	0.5	0.25	0.75			5.2
B207	STD	10 x 2 x 2	10	2	1.5	0.5	2			11.0
B208	STD	10 x 2 x 0.75	10	2	0.5	0.25	0.75			4.4
B209	STD	11.5 x 2 x 2	11.5	2	1.5	0.5	2			12.7
B210	STD	7.75 x 3 x 3	7.75	3	2.5	0.5	3			19.6
B211	STD	9 x 2 x 2.25	9	2	1.5	0.75	2.25			11.9
B300	STD	11.75 x 1 x 1	11.75	1	0.5	0.5	1			3.3
B301	STD	11.75 x 1.5 x 1.25	11.75	1.5	1	0.25	1.25			6.6
B302	STD	11.75 x 6 x 2.25	11.75	6	1.75	0.5	2.25			46.5
B303	STD	11.75 x 2 x 2.25	11.75	2	1.5	0.75	2.25			15.4
B401	STD	17 x 2 x 2	17	2	1.5	0.5	2			18.7
B402	STD	18 x 1.5 x 1.25	18	1.5	1	0.25	1.25			9.2
B403	STD	15.75 x 1.5 x 1	15.75	1.5	0.5	0.5	1			7.4
B404	STD	17.75 x 1.5 x 1.25	17.75	1.5	1	0.25	1.25			8.8
B600	STD	23.5 x 2 x 2	23.5	2	1.5	0.5	2			26.0

 Indicates Standard Stock Items

## JADCO SHAPED HARDBAR

JADCO HardBars can be shaped to your specific applications. They prevent gouging wear, enabling your buckets and machines to run far longer – with significantly less maintenance required.

Part Number	Type	Size (in.)	Nominal Dimensions (in.)							Weight (lbs.)
			A	B	C	D	E	F	G	
SB1200	1	7.75 x 0.75 x 1.25	7.75	0.5	0.75	0.75	0.25	1		1.7
SB1202	1	8 x 1 x 1.25	8	0.25	1	1	0.25	1.25		1.9
SB1244	1	9.5 x 1 x 1.25	9.5	0.25	1	1	0.25	1.25		1.7
SB2275	2	10.75 x 0.5 x 1	10.75	0.25	0.5	0.75	0.25	1	0.5	1.9
SB3150	3	6 x 1.5 x 2.75	6	0.25	1.5	2.5	0.25	2.75	0.75	5.2
SB3200	3	7.75 x 1 x 2.25	7.75	0.25	1	1.75	0.5	2.25		3.3
SB3400	3	15.75 x 1 x 2.25	15.75	0.25	1	1.75	0.5	2.25		6.3
SB4125	4	5 x 1.5 x 3.5	5	0.25	1.5	3.25	0.25	3.5		9.4
SB4200	4	7.75 x 1 x 2	7.75	0.25	1	1.5	0.5	2		3.3
SB4400	4	15.75 x 1 x 2	15.75	0.25	1	1.5	0.5	2		6.3

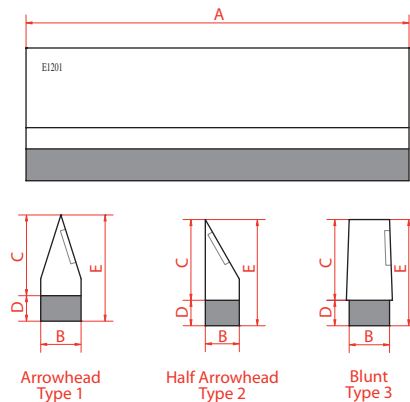


## JADCO HARDEGE – KNIFE EDGES

Our HardEdges are cost-effective alternatives to everyday hand hardfacing methods. In even the toughest jobs, they retain their sharpness – resulting in improved cutting efficiency to virtually all other methods.



Part Number	Type	Size (in.)	Nominal Dimensions (in.)							Weight (lbs.)
			A	B	C	D	E	F	G	
E1201	1	8 x 0.75 x 2	8	0.75	1.5	0.5	2			2.4
E1202	1	8 x 0.75 x 2	8	0.75	1.5	0.5	2			2.8
E1203	1	8 x 1 x 2.5	8	1	2	0.5	2.5			4.4
E1301	1	12 x 0.75 x 2	12	0.75	1.5	0.5	2			3.5
E1302	1	12 x 1 x 2	12	1	1.5	0.5	2			4.8
E2201	2	8 x 0.5 x 2	8	0.5	1.5	0.5	2			2.2
E2301	2	12 x 1 x 2.25	12	1	1.5	0.75	2.25			5.5
E3201	3	8 x 0.75 x 2	8	0.75	1.5	0.5	2			3.5
E3202	3	8 x 1 x 2	8	1	1.5	0.5	2.5			5.0

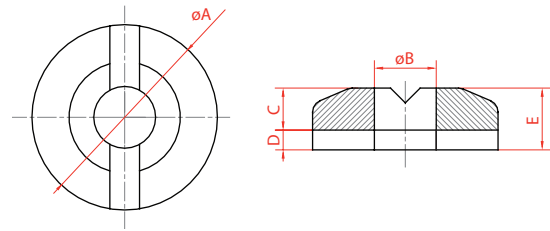




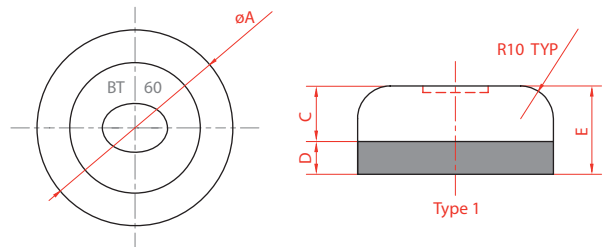
## JADCO HARDGUARD – BUTTONS AND DONUTS

Ideal for a vast number of wear-prone areas. Available in diameters from 2.25" to 6" and easy to apply, they offer superior protection versus hand hardfacing or steel strips cut from full sheets of metal wear plates.

Our products are perfectly suited for those localized trouble spots on heavy earthmoving equipment such as buckets, transfer points, and ground-engaging tools.



Part Number	Type	Size (in.)	Nominal Dimensions (in.)							Weight (lbs.)
			A	B	C	D	E	F	G	
D75	DONUT	ø3 x 1	3	1	0.75	0.25	1			1.5
D101	DONUT	ø4 x 1	4	2	0.75	0.25	1			2.2
D102	DONUT	ø4 x 1.25	4	2.75	1	0.25	1.25			2.2
D130	DONUT	ø5 x 1	5	3	0.5	0.5	1			2.8

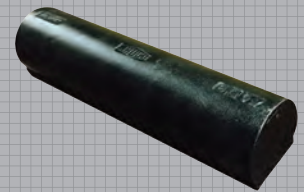


Part Number	Type	Size (in.)	Nominal Dimensions (in.)							Weight (lbs.)
			A	B	C	D	E	F	G	
BT60A	1	ø2.25 x 1	2.25		0.75	0.25	1			1.5
BT75A	1	ø3 x 1	3		0.75	0.25	1			1.9
BT90A	1	ø3.5 x 1	3.5		0.75	0.25	1			2.6
BT115A	1	ø4.5 x 1.25	4.5		0.75	0.5	1.25			5.7
BT150A	1	ø6 x 1.5	6		1	0.5	1.5			12.5

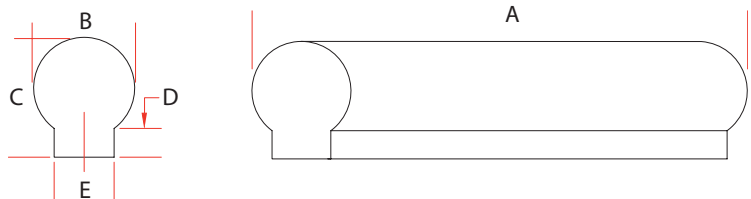


## JADCO HARDROLL – ROLL BARS

JADCO HardRoll is designed to protect the leading edge of bucket side plates for maximum protection in tough, abrasive conditions while moving material. Typical benefits include: impact deflection, bucket efficiency (better penetration) and better wear characteristics than burnt or formed plate.



Part Number	Nominal Dimensions (in.)					Weight (lbs.)
	A	B	C	D	E	
PL5045	9"	1.25"	1.5"	.36	0.75	4
PL5046	12"	2"	2"	.38	1.5	12
PL5047	12"	3"	2.72"	.38	2.5	23



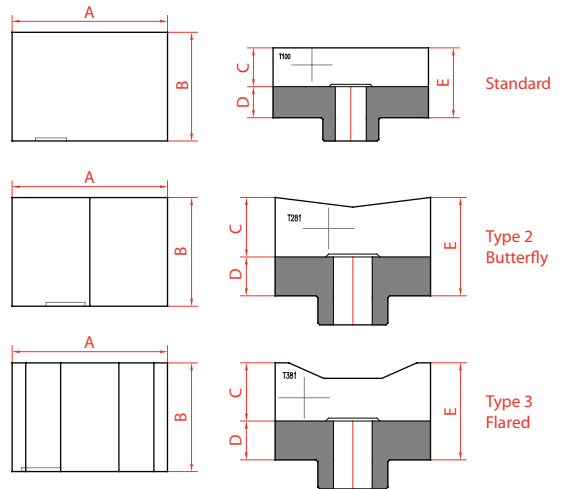
Section A-A

## JADCO **HARDTIP** – SHREDDER TIPS

For coal-crushing and sugarcane shredding, try JADCO HardTips. They're easy to install via bolts or welding. Their edges can be rotated to optimize tip life and overall performance.

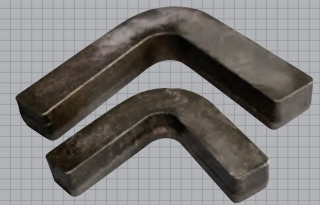


Part Number	Type	Size (in.)	Nominal Dimensions (in.)							Weight (lbs.)
			A	B	C	D	E	F	G	
T175	1	3 x 3 x 1.75	3	3	1	0.75	1.75			4.4
T181	1	3 x 2.25 x 1.75	3	2.25	1	0.75	1.75			3.5
T182	1	3 x 3 x 1.75	3	3	1	0.75	1.75			5.2
T191	1	3.5 x 2 x 1.75	3.5	2	1	0.75	1.75			3.5
T192	1	3.5 x 3.5 x 1.75	3.5	3.5	1	0.75	1.75			6.3
T100	1	4 x 4 x 1.75	4	4	1	0.75	1.75			7.9
T281	2	3 x 2.25 x 2	3	2.25	1.25	0.75	2			4.1
T291	2	3.5 x 3.5 x 2	3.5	3.5	1.25	0.75	2			6.8
T292	2	3.5 x 2 x 2	3.5	2	1.25	0.75	2			3.9
T381	3	3 x 2.25 x 2	3	2.25	1.25	0.75	2			3.9
T391	3	3.5 x 3.5 x 2	3.5	3.5	1.25	0.75	2			6.6

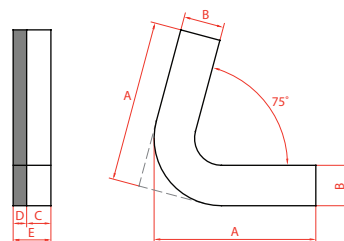


## JADCO **HARDBOOM** – BOOMERANGS

JADCO HardBoom is your best choice for bucket, rock box, truck body, and screen deck protection. Easy to install, they far surpass plates for safeguarding your high-wear areas.



Part Number	Type	Size (in.)	Nominal Dimensions (in.)							Weight (lbs.)
			A	B	C	D	E	F	G	
BM120	STD	4.75 x 4.75 x 1	4.75	1	0.75	0.25	1			2.8
BM180	STD	7 x 7 x 1.25	7	1.5	1	0.25	1.25			6.6





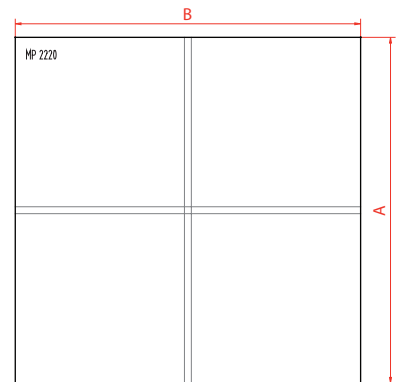
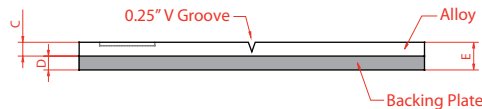
## JADCO HARDPLATE – WEAR PLATES

You can combine various sizes of our HardPlates to create an optimal wear/abrasion field of protection that will drastically cut your overall downtime. Just weld them to your surface, no pre- or post-heating necessary.

Ideal for chutes, bins, hoppers, liners, impact walls, rock boxes...



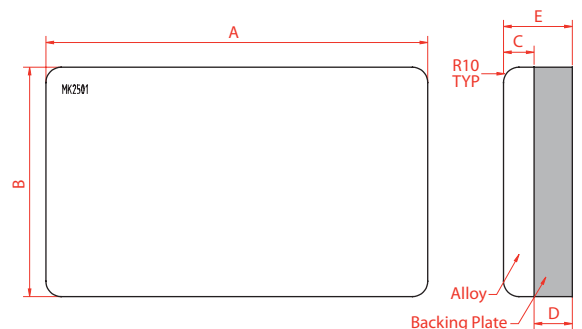
Part Number	Nominal Dimensions (in.)							Weight (lbs.)
	A	B	C	D	E	F	G	
MP2220	7.75	7.75	0.25	0.5	0.75			13.8
MP3320	11.75	11.75	0.25	0.5	0.75			31.0
MP2218	7.75	7.75	0.5	0.25	0.75			12.5
MP3318	11.75	11.75	0.5	0.25	0.75			27.9



## JADCO HARSKID – SKID BARS

JADCO HardSkid extends the service life of the mining and quarrying buckets on your wheel loaders, excavators, and dippers.

Part Number	Nominal Dimensions (in.)							Weight (lbs.)
	A	B	C	D	E	F	G	
MK2501	9.75	6	0.75	1	1.75			28.8
MK2001	7.75	6	0.75	1	1.75			22.2
MK2502	9.75	9.75	0.75	1	1.75			48.2
MK2031	8	6	1	.5	1.5			?
MK2051	8	8	1.5	.5	2			?
MK4031	16	16	.75	.5	1.25			?



■ Indicates Standard Stock Items

Fig A



Fig B

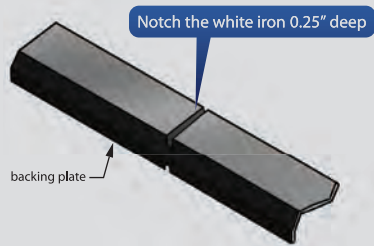


Fig C



Fig D



Fig E



Fig F



Fig G



## CUTTING INSTRUCTIONS

**Recommended:** high-pressure water-jet cutting.

**Not recommended:** thermal cutting with an oxyacetylene torch, arc-air, or plasma. Abrasive disc cutting is acceptable for blocks with less than 1" section thickness.

- Secure the block in vise or clamp.
- Notch the backing plate (**Fig A**) and the white iron a 1.25" depth opposite the plate (**Fig B**).
- Wrap the block in a rag, then carefully hit it with a soft-face hammer. Block should easily break at the notch.

## WELDING INSTRUCTIONS

Make sure that the surface to which you'll attach the block is clean and flat.

- Clamp and tack-weld the block into position.
- Stitch-weld, laying no more than 2" lengths per run, alternating ends or sides to minimize heat penetration. Do NOT deposit-weld within 0.25" from the joint (**Fig C**).
- Do NOT weld continuously. Such activity could cause warpage, delamination, or cracking. Do not exceed 400° F (200° C) temperatures.
- Use low-hydrogen welding rods or gas-covered cored wire.

## FORMING PROCEDURE

For curves with a radius less than 12" or for inside curves, notch the steel backing plate opposite the "V." This assists with forming (**Fig D**). (**NOTE:** JADCO HardChoc may crack during bending... this is normal.)

- Thoroughly clean the surface to which you'll weld HardChoc.
- Tack-weld one end of the bar by a minimum of 0.75" in length per weld (**Fig E**).
- For outside curves, softly hammer the unwelded end to bend the bar to match the mating radius (**Fig F**).
- For inside curves, softly hammer the bar (starting at the center) to bend the piece to match the mating radius (**Fig G**).
- Stitch-weld as noted in the Welding Instructions.

JADCO is a leading provider and manufacturer of proven protection for impact and abrasion challenges faced by customers worldwide in:

- > Mining
- > OEM
- > Material Handling
- > Asphalt and Road Building
- > Tunneling
- > Concrete and Cement
- > Oil and Gas
- > Power Generation
- > General Industrial
- > Steel Mills and Foundries
- > Pulp and Paper
- > Aggregates
- > Waste and Recycling
- > Dredging

Our QT-PLUS® Wear Steel has up to *3-5 times the wear life* of commodity AR wear steel, making it ideal for a wide range of plates and liners requiring high hardness and tensile strength.

Our CHROMEWELD, a Chromium Carbide Overlay Wear Steel, is a unique material with a consistent chemistry that reduces severe abrasion challenges of liners, plates, hoods, and wear parts.

We also design and manufacture Screen Plates, Grizzly Bars, Wear Bars, Plates, Castings, Forgings, and Custom-Fabricated Parts for a multitude of industrial applications.



JADCO Manufacturing, Inc.

P.O. Box 465 • Zelenople, PA 16063

phone: 724-452-5252 • fax: 724-452-1318

[JADCOMFG.COM](http://JADCOMFG.COM)

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