



PROVEN PROTECTION

FOR IMPACT AND ABRASION CHALLENGES

ISO 9001:2015

JADCOMFG.COM

PROVEN PROTECTION... FOR **IMPACT** AND **ABRASION** CHALLENGES



Table of Contents

| | |
|---|-----|
| About JADCO | 1 |
| QT-PLUS® Wear Steel | 2-3 |
| CHROMEWELD™ Chromium Carbide Overlay | 4 |
| CHROMEWELD™ 600 | 5 |
| CHROMEWELD™ Nb PLUS / CHROMEWELD™ COMPLEX | 6 |
| CHROMEWELD™ Ti / CHROMEWELD™ W | 7 |
| CHROMEWELD™ FLOW / CHROMEWELD™ GLIDE | 8 |
| FUSION™ Wire | 9 |
| Duracorr®300 | 10 |
| RT500 / JADCO 400, 450 & 500 Abrasion Resistant Steel | 11 |
| Screen Plates / Grizzly Bars / Wear Bars | 12 |
| Buildings | 13 |
| Fabricated Parts | 14 |
| Fabricated Kits / Castings and Forgings | 15 |
| HARDGUARD™ Wear Steel | 16 |
| FLEXWEAR™ | 17 |

JADCO Manufacturing, Inc.

- > Family-owned business for over 40 years
- > 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™, SolidWorks® and 3D scanning, 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 | > Power Generation |
| > OEM | > Steel Mills and Foundries |
| > Material Handling | > Pulp and Paper |
| > Asphalt and Road Building | > Aggregates |
| > Tunneling | > Waste and Recycling |
| > Concrete and Cement | > Dredging |
| > Oil and Gas | > Agriculture |
| > Glass | > Air Handling |
| > Wastewater Treatment | > Sugar |

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.

PROVEN PROTECTION... FOR **IMPACT** AND **ABRASION** CHALLENGES



**PREMIUM QUALITY
THROUGH HARDENED
WEAR STEEL
WITH UP TO
3-5 TIMES
WEAR LIFE OF
COMMODITY
AR 400**



Why QT-PLUS®?

| | QT-PLUS® Wear Steel | Commodity AR Steels |
|-----------------------|-----------------------------------|--|
| Weldability | Excellent | Poor (due to high carbon content) |
| Toughness | Extreme | Moderate (due to little or no alloy) |
| Through-Hardness | Excellent | None |
| Consistent Properties | Uniform | "Hard" and "Soft" Spots (due to improper heat-treating) |
| Quality Parts | Made Under Strictest Standards | Often Warped or Wavy (making installation difficult) |
| Fabrication | User-Friendly | Difficult |

QT-PLUS® Wear Steel

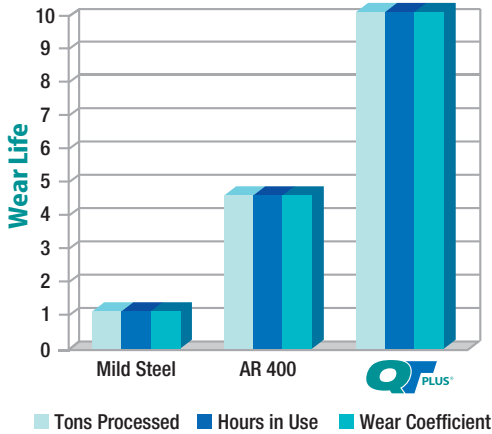
JADCO QT-PLUS® wear steel, a company exclusive, combines a specific chemistry with a unique thermal heat-treating process. Result: a premium-quality grade of alloy steel unmatched in the industry, with up to 3-5 times wear life of commodity AR400 wear steel.

Parts made from QT-PLUS® not only provide outstanding resistance to abrasion (500 BHN) and wear, but are amazingly ductile.

Individual Plates Available

QT-PLUS® steel plates come in a variety of standard or cut-to-size dimensions. JADCO stocks plate in sizes from 3/16" up to 5" thick.

QT-PLUS® VS. AR 400 & MILD STEEL



Typical Applications:

- > Wear Plates
- > Breaker Plates
- > Truck Bed Liners
- > Bin Liners
- > Sprockets
- > Flume Liners
- > Impact Plates
- > Mixer Paddles
- > Rock Crusher Liners
- > Screens
- > Nose Plates
- > Bucket Lips
- > Hopper & Bin Liners
- > Fan Blade Liners
- > Cyclones
- > Skip Car Liners
- > Cone Liners

3/16" up to 5" thick in stock

Mechanical Properties:

Hardness – Thickness <1" – 461/537 BHN
Thickness >1" – 444/514 BHN

Tensile (typical) – 225,000 psi

Elongation in 2" – 11% (typical)

Charpy V – 20 ft/lbs @ -40°F (typical)

Yield (typical) – 165,000 psi



Fabrication Facts

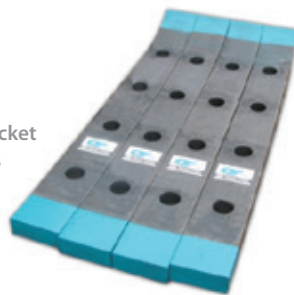
Machining: With proper tooling and speeds, QT-PLUS® can be machined and drilled using conventional methods. Please contact your JADCO representative to discuss your specific requirements.

Welding: Rods should be dry-welded on a moisture-free surface. Pre-heating is preferred to reduce thermal shock (250° max). Use FUSION™ Ultrabond weld rod. If no pre-heat is possible, FUSION™ Universal is preferred. Welds in restraint should be avoided.

Flame Cutting: QT-PLUS® is easily flame cut with oxyacetylene or plasma. Hardening will occur at the edge of the cut and it's beneficial to pre-heat before flame cutting (350°F) or allow enough stock to get below the hardened edge.

Bending: QT-PLUS® is cold-formable with the proper equipment. The material's toughness enables it to be rolled or formed for almost any application. We recommend 8T across the grain and 12T with the grain. Transverse to the grain is preferred.

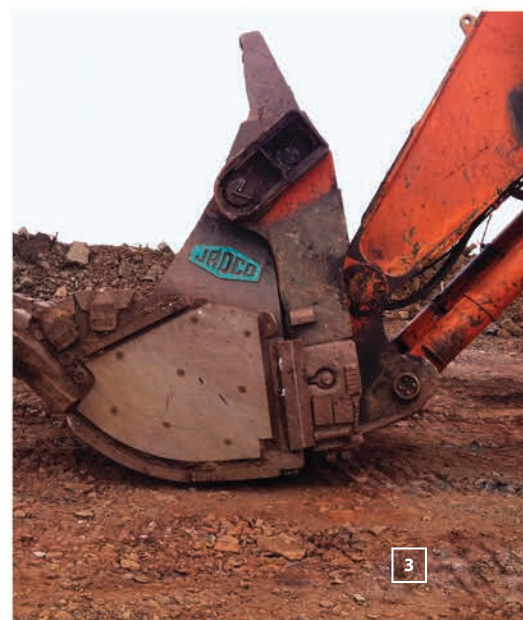
3" thick bucket heel bands



TYPICAL CHEMISTRY

| Carbon | Manganese | Phosphorus | Sulfur | Silicon | Nickel | Molybdenum | Chromium | Boron | Hydrogen |
|--------------|-----------|------------|------------|-----------|---------|------------|----------|------------|----------|
| C | Mn | Ph | S | Si | Ni | Mo | Cr | B | H |
| .24/.26 max. | 1.0 | 0.035 max. | 0.005 max. | 0.55 max. | 1.0-2.0 | 0.25 | 0.5 | 0.003 max. | <4 ppm |

Percentages Shown



PROVEN PROTECTION... FOR **IMPACT** AND **ABRASION CHALLENGES**

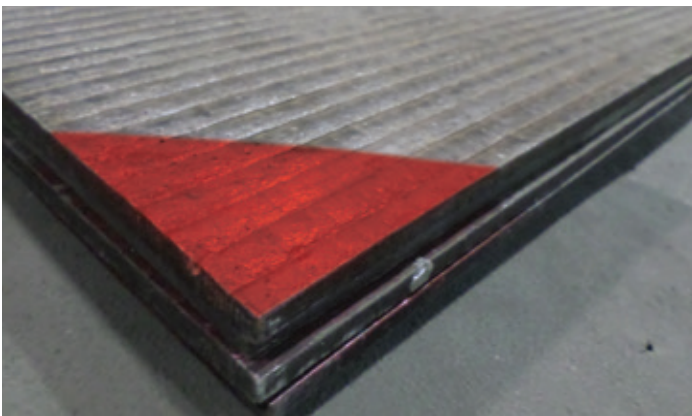


HEAVY-DUTY CHROMIUM CARBIDE OVERLAY STANDS UP TO THE TOUGHEST, MOST DEMANDING ABRASION WEAR CONDITIONS

JADCO's CHROME WELD™ Family has continued to evolve and grow over time. With our proprietary chemistry and manufacturing processes, we continue to strive to meet all your abrasion needs.

Our products are used in a wide range of applications, from mobile equipment liners to frag sand transportation. CHROME WELD™ has met those needs with a variety of overlay materials including plates (600), pipes (FLOW) and wire (FUSION).

Each grade of CHROME WELD™ is developed to meet a specific wear application. Whether that challenge is severe abrasion (W), fine particle abrasion (Nb PLUS), combating high impact (Ti) or fighting those ultra-demanding conditions (COMPLEX), JADCO's CHROME WELD™ series will be able to meet your application. The unique chemistries allow for uniformity of the overlay, yet enough customization to meet the needs of each application head on.



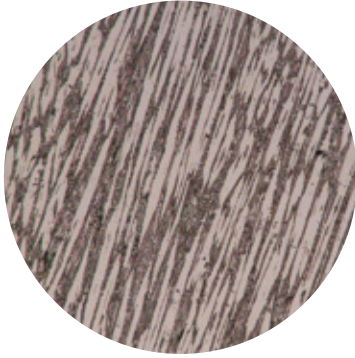
Underground and above ground mobile equipment along with power plants, cement plants, asphalt plants, steel mills, and coal preparation plants are among the many industries that provide ideal conditions for the use of CHROME WELD™ wear plate.

Key Benefits:

- > More cost-effective solution when compared to traditional abrasion-resistant steels
- > Superior abrasion resistance and performance in elevated temperatures.
- > Low maintenance cost and easy installation.

Typical Applications:

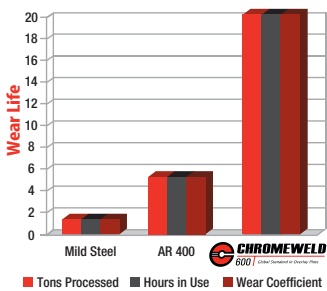
- > Continuous & Longwall Miner Parts
- > Chutes & Hopper Liners
- > Screed Plates
- > Skirt Boards
- > Screw Conveyor Flights
- > Mobile Equipment Liners
- > Drag & Shovel Bucket Liners
- > Haulage Systems
- > Truck Bed Liners
- > Fan Blades
- > Cheek Plates
- > Washer Bottoms
- > Chipper Hoods
- > Cullet Handling



Micro Etched @ 50X

The JADCO process produces a microstructure consisting of fully austenitic matrix filled with primary carbides. This structure provides outstanding abrasion resistance in the most challenging applications.

CHROME WELD™ VS. AR 400 & MILD STEEL



TYPICAL CHEMISTRY

2-Layer Deposit

| Carbon | Chromium | Manganese | Silicon | Iron |
|---------|----------|-----------|---------|---------|
| C | Cr | Mn | Si | Fe |
| 4.5 – 6 | 25 – 30 | 2 – 3 | 1 | balance |

Percentages Shown

CHROME WELD™ 600 Overlay

A premium grade of chromium carbide wear plate. Produced with a variety of base plate and hardfaced/overlayed with our proprietary JADCO FUSION™ WIRE.

Displays excellent abrasion resistance and will withstand continuous moderate impact. The plate maintains abrasion resistance in operating temperatures up to 1100°F.

CHROME WELD™ 600 typical hardness ranges from 58-62 HRC based on weld deposit thickness. The surface of the plate exhibits numerous hairline cracks that are essential to the performance of the plate and enable it to be formed, bent, and rolled without damage.

Standard plate size is 90" wide x 120" long or 9" x 240" in select thicknesses. Standard thickness range from 1/8" on 1/8" (.25") through 1/2" on 1" (1.5"). As with all our products, custom is standard at JADCO. Many other thicknesses and grades are available.

Specific overlay solutions can be customized to meet your abrasion challenges.



PROVEN PROTECTION... FOR **IMPACT** AND **ABRASION** CHALLENGES

SPECIALTY A



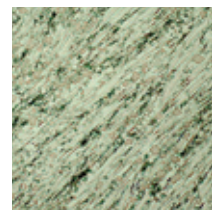
CHROME WELD™ Nb PLUS is a Niobium (Nb) carbide overlay plate optimized for fine particle and extreme abrasion. CHROME WELD™ Nb PLUS weld deposit consists of primary chromium carbides compiled with niobium carbides in an austenitic matrix.

By comparison, CHROME WELD™ Nb PLUS contains a more abrasion resistant deposit to traditional chrome carbide plates. Depending on the specific environment, wear life can be extended 30-60%. This plate also offers better wear resistant at elevated temperatures due to its enhanced chemistry. These plates exhibit high hardness, typically in the range of 63-68 HRC. Standard plate size is 90" wide x 120" long. Standard thicknesses range from 1/8" on 1/4" (.375") through 1/2" on 1/2" (1").



| TYPICAL CHEMISTRY | | | | | |
|-------------------|----------|-----------|---------|---------|---------|
| 2-Layer Deposit | | | | | |
| Carbon | Chromium | Manganese | Silicon | Iron | Niobium |
| C | Cr | Mn | Si | Fe | Nb |
| 4-6 | 20-26 | 0-1 | 0-2 | balance | 6-8 |

Percentages Shown



Austenitic Matrix



CHROME WELD™ COMPLEX

is an overlay plate consisting of small primary chromium carbides, and secondary Niobium and Vanadium carbides for ultra-demanding conditions.

The high concentration of small carbides greatly improves wear resistance and toughness over standard chromium carbide plate.



APPLICATIONS



*Specially Blended Overlay Plate
to Combat Impact and Abrasion*

CHROME WELD™ Ti is a unique material that is ideal for surfaces requiring high levels of abrasion resistance, along with heavy impact. It is a premium grade of overlay wear plate developed with an ultra-tough matrix and finely dispersed abrasion and impact resistant, titanium carbides.

CHROME WELD™ Ti has a typical hardness range from 56-60 HRC based on the weld deposit thickness. The surface of the plate is a composite of titanium carbides in a high chromium martensitic matrix. The chemistry displays excellent abrasion resistance, all while withstanding heavy impact. Standard plate sizes are 90" x 120" and can vary in thicknesses from 1/8" on 1/4" (.375") and 1/2" on 1/2" (1").

| TYPICAL CHEMISTRY | | | | | | |
|-------------------|----------|-----------|---------|----------|------------|----------|
| 2-Layer Deposit | | | | | | |
| Carbon | Chromium | Manganese | Silicon | Titanium | Molybdenum | Vanadium |
| C | Cr | Mn | Si | Ti | M | V |
| 1-2 | 5-10 | 1-2 | 1-2 | 6-10 | 1-2 | 1 |

Percentages Shown



Tungsten Carbide Overlay Plate

CHROME WELD™ W is a material designed to withstand your most severe abrasion applications. This overlay plate combines the benefits of our premium CHROME WELD™ chemistry along with the addition of tungsten carbide deposited throughout the matrix. Our manufacturing process produces a plate that has tungsten carbide dispersed throughout the entire matrix.

CHROME WELD™ W typical hardness range from 70-75 HRC depending upon deposit thickness. The surface of the plate is a composite of tungsten carbide combined with chromium iron carbides. The surface of the plate exhibits numerous hairline cracks which are essential to the performance of the plate and enable it to be formed, bent and rolled without damage.

| TYPICAL CHEMISTRY | | | | | |
|-------------------|----------|-----------|---------|---------|----------|
| 2-Layer Deposit | | | | | |
| Carbon | Chromium | Manganese | Silicon | Iron | Tungsten |
| C | Cr | M | S | Fe | W |
| 4.5- 6 | 25 - 30 | 0 - 2 | 0 - 2 | Balance | 35 - 40% |

Percentages Shown



PROVEN PROTECTION... FOR **IMPACT** AND **ABRASION** CHALLENGES



CHROME WELD™ FLOW

CHROME WELD™ FLOW is a unique piping system that is ideal for material movement with high levels of abrasion resistance.

The JADCO process produces a microstructure consisting of fully austenitic matrix filled with primary carbides. This structure provides outstanding abrasion resistance in the most challenging applications. Standard wall thickness range from 1/8" through 3/8".

- Diameters are available from 4" to 48"
- Hardness 52-56 HRC
- Flanges available per application
- Abrasion resistant up to 1100°F

Different Types of FLOW



Straight



Y-Pipe



T-Pipe

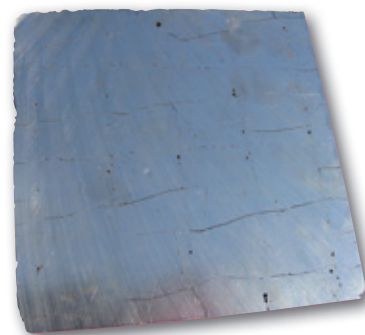


Elbow

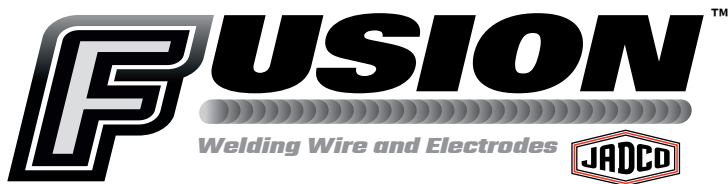


CHROME WELD™ GLIDE is a polished, non-stick surface produced to minimize or eliminate material adhering to the surface.

The low coefficient of friction allows for reduced sticking or carryback in a variety of applications such as chutes, hoppers, mobile equipment and truck box liners. Standard plate size is 90" x 60" in all available thicknesses. Standard thicknesses are 1/4" on 1/4" (.5 overall) and 3/8" on 3/8" (.75 overall).



CHROME WELD™ GLIDE CHROME WELD™ 600



Our wear products are available to a variety of industries, combating environment and materials, to fight against wear challenges all over the globe. To assist our customers in their installation efforts in the field, we offer the JADCO **FUSION™** Line of joining and hardfacing wires and electrodes.



| FUSION™ Wire & Rod Comparison Chart | | | | | | | | |
|-------------------------------------|-----------|-----------|---|--------------|------------------------------|---|--|----------------------|
| | Abrasion | Impact | Hardness | Layer Max. | Position | Surface Cross Checks | Machinability | Temperatures (Up to) |
| FUSION™ AP | Good | Good | 55-60 HRC | 4 Layer | All | None, with proper preheat & interpass temperature | Poor | 1000°F |
| FUSION™ GO | Excellent | Moderate | 60 - 65 HRC | 2 Layer | Flat & Horizontal | Yes | No | 1100°F |
| FUSION™ TI | Excellent | Heavy | 56 - 60 HRC | 3 Layer | Flat & Horizontal | Little to none, with proper preheat & interpass temperature | Too Hard. Recommended for grinding only. | 1110°F |
| FUSION™ W | Excellent | Moderate | Matrix: 400-450 HV Tungsten carbides: 2000-2500 HV | 1 Layer | Flat, Horizontal, & Vertical | With Cracks | Too Hard. Recommended for grinding only. | 1110°F |
| FUSION™ 600 | Excellent | Moderate | 58- 65 HRC | 3 Layer | Flat, Horizontal, & Vertical | Yes | No | 1000°F |
| FUSION™ 600 E | Excellent | Moderate | 58- 65 HRC | 3 Layer | All | Yes | No | 1000°F |
| FUSION™ NB | Excellent | Excellent | 62 - 64 HRC | 1 or 2 Layer | Flat & Horizontal | Yes | No | 1000°F |
| FUSION™ UNIVERSAL | Moderate | Excellent | 150-200 HB AW 47 - 50 HRC WH | Unlimited | All | No | Yes | 1000°F |
| FUSION™ UNIVERSAL E | Moderate | Excellent | 150-200 HB AW 47 - 50 HRC WH | Unlimited | All | No | Yes | 1000°F |
| FUSION™ ULTRABOND | Poor | Excellent | N/A | Unlimited | All | No | Yes | 1000°F |

FUSION™ options vary in general purpose to particular material abrasion wear. Our selection allows you to find the best suited wire or electrode for your application, whether it be chrome-free, applied in/out of position or applied in one layer deposits.

GENERAL INFORMATION:

- Standard wires are provided in 33 lbs. fiber spools
- Standard rod is provided in 10 lbs. Vac Pak
- Stocked wire options are .045" and 1/16"Diameter
- Custom thicknesses are available, please reach out to your sales representative to learn more.

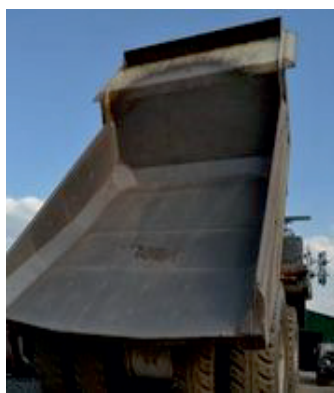


PROVEN PROTECTION... FOR **IMPACT** AND **ABRASION** CHALLENGES

Duracorr® 300



JADCO Manufacturing is an approved reseller of **Duracorr® 300**. Duracorr® 300, is a low carbon, 12% chromium stainless steel which is produced to a nominal hardness of 300 BHN, for applications where both abrasion and corrosion resistance are required. Improved dent resistance is a strong attribute for Duracorr® 300 over the other stainless steels.



Typical Applications:

- > Truck Liners (including Salt)
- > Coal Processing
- > Paper Mills
- > Power Plants
- > Quarry Chutes
- > Storage Bins
- > Dry Docks
- > Fertilizer Handling and Storage

| TYPICAL CHEMISTRY | | | | | | | | |
|----------------------------------|-----------|-----------|--------|------------|---------|--------|----------|-------------|
| maximums unless a range is shown | | | | | | | | |
| Carbon | Chromium | Manganese | Sulfur | Phosphorus | Silicon | Nickel | Nitrogen | Molybdenum |
| C | Cr | Mn | S | P | Si | Ni | N | Mo |
| 0.025 | 11 – 12.5 | 1.5 | 0.010 | 0.040 | 0.70 | 1.00 | 0.030 | 0.20 – 0.35 |

Percentages Shown

RT500 RAZOR TUFF



RAZOR-THIN WEAR PROTECTION FOR SUPERIOR ABRASION RESISTANCE

RAZOR TUFF Wear Steel

As a JADCO 500 BHN wear steel, **RT500** is intended for applications requiring a combination of high abrasion resistance but yet maintain weldability. Available in 1/8" or 3/16" thicknesses, it is produced to achieve a fine-grain and clean microstructure with low levels of non-metallic inclusions.

Size Ranges*:

Thickness – 1/8" and 3/16"

Dimensions – 60" width x 120" length

* Other thicknesses and sizes available upon request.

Mechanical Properties:

Surface Hardness – 470 BHN – 535 BHN (target: 500 BHN)

Methods – Mechanical tests in compliance with ASTM A370 (latest version).

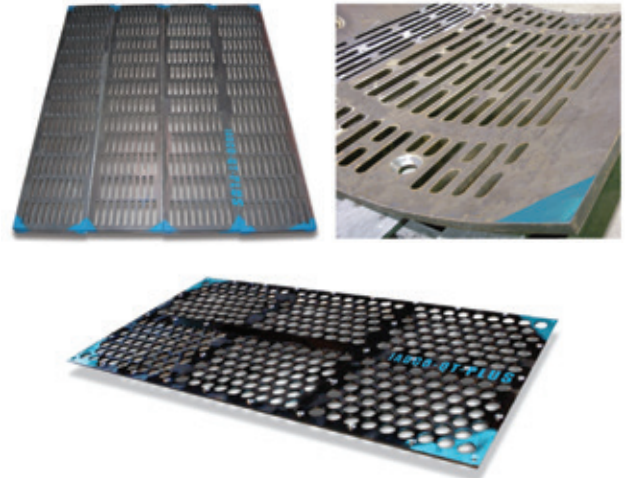
Frequency – Test material per heat, per size, and per heat-treat load.

JADCO 400 450 & 500

JADCO 400, 450 and 500 are superior steels designed for moderate to high abrasion and impact applications. Due to the heat-treating process and chemistry JADCO 400, 450 and 500 yield a lengthier service to the end user than mild steel. With a low carbon and alloy content, their properties allow for great capabilities weldability and forming.



INCREASED PRODUCTIVITY FEWER CHANGEOUTS LESS DOWNTIME



Screen Plates

JADCO offers custom-designed screen plates for efficient screening in a variety of applications, including mining/aggregate and general industry.

Produced with JADCO QT-PLUS®, these plates provide *up to 3-5 times wear life* of commodity AR400 wear steel used for screen applications. Result: a premium-quality grade of alloy steel unmatched in the industry, with *up to 3-5 times the wear life* of commodity AR400 used for screen applications. That means a significantly greater return on your screen investments.

As the applications range for metal screens increases, JADCO's ability to design and fabricate virtually any opening, using high-definition plasma, enables us to quickly deliver custom or standard screen plates.

Grizzly Bars

Don't compromise. Use JADCO QT-PLUS® grizzly bars to protect your grates and other equipment.

We produce high-impact and abrasion-resistant grizzly bars in round, flat, square, and custom shapes. These can be produced to any length and weight you require.

Manufactured with our proprietary QT-PLUS® steel plate, our grizzly bars offer up to *3-5 times* the wear life of commodity AR400.



JADCO grizzly bars are especially suited to heavy-duty, high-capacity applications.



Wear Bars & Plates

Wear bars and plates made with QT-PLUS® premium steel combine the ductility of 400 BHN with the abrasion resistance of 500 BHN. These products are designed to combine hardness and toughness with ease of machining and fabrication. They offer up to *3-5 times wear life* of commodity AR400 wear steel bars and plates.

JADCO wear bars and plates come in custom thicknesses and widths. Contact your sales representative for more information on custom options



Typical Applications:

- > **Chip Drag Conveyors**
- > **Guide Bars**
- > **Chain Returns**
- > **Transfer Bars**
- > **Conveyer Wear Bars**
- > **Hold Down Bars**
- > **Rambo Bars**
- > **Tumble Bars**

STEEL BUILDINGS

CUSTOM PORTABLE BUILDINGS FOR ALL APPLICATIONS

TekBuilt Pre-Assembled Buildings

JADCO manufactures TekBuilt custom steel enclosures to fit most application control building needs.

Our modular buildings provide a cost-effective solution for personnel space requirements. From control rooms to security booths to work trailers and office buildings, our enclosures always work for you. Your particular enclosure may be standard or we will custom-design one based on your specifications.



Modular Building Products

JADCO offers a variety of modular building products, even modular/panelized buildings for personnel and storage applications. We can custom design and install an office, clean room, or computer room, to fit your needs.

Tool cribs, robotic enclosures, and safety gates are just a few of the uses for JADCO Modular Building Products. We also provide platforms, stairs, and mezzanines for production and storage applications.



PROVEN PROTECTION... FOR **IMPACT** AND **ABRASION** CHALLENGES

NO MATTER THE SIZE, NO MATTER THE QUANTITY, LOOK TO JADCO FOR QUALITY FABRICATION

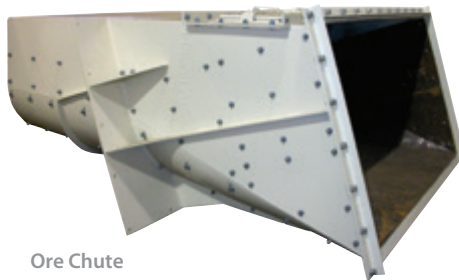
Heavy Steel Fabrication

JADCO is a high-tech steel fabricator, employing the latest technology and manufacturing processes to make the finest steel products available. We pride ourselves on being able to provide total solutions on most projects. We maintain a full complement of fabrication equipment and can handle complex jobs, including hoppers, troughs, and sumps in standard and special sizes.

Whether it's a custom or large production run, we're committed to meeting your fabrication needs.



Hydraulic Shovel Bucket



Ore Chute



CHROMEWELD
PREMIUM OVERLAY PROTECTION

Design Capabilities

To ensure complete customer satisfaction, JADCO provides support for product design and development using Solidworks®, Autocad™ and 3D printing. By helping our customers in the development of their products, we hope to build lasting relationships and trust.

Services:

- > Oxyfuel & High-Definition Plasma Cutting
- > Forming & Plate Rolling
- > Full Weld Shop – AWS D1.1 Certified
- > Machining
- > Saw Cutting
- > Painting
- > Assembly
- > Logistics
- > 3D Scanning
- > Hardfacing
- > Tungsten Embedding
- > Blanchard Grinding

Fabrication Facts

Hardfacing: JADCO specializes in hard surface coatings that apply overlays to existing parts to protect against abrasion and corrosion.

Rolled & Welded Parts: We supply a variety of rolled and welded parts, from thin gauges through 8-inch thick steel.

Burnouts: JADCO manufactures precision-made parts using the latest technology including: high definition plasma, oxyacetylene, and water-jet.

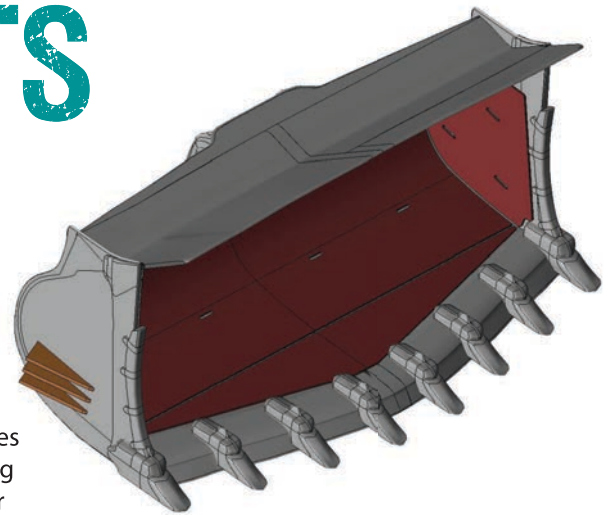
FABRICATED KITS

SUPPLIED TO YOUR SPECIFICATIONS

Kits

We also offer complete fabricated kits – made to almost any specification or requirement. Our unique capability to produce custom-component parts enables us to provide, for example, wear-liner packages for buckets and chutes, including installation diagrams and identification tags to eliminate any guesswork by your on-site crew. Bearings, paint, and hardware can be part of the package, too, if needed.

Parts can be manufactured individually or shipped together for final assembly.



Kit examples include truck liner packages, chutes, hoppers and conveyors, dipper buckets, and dragline buckets.

CASTING AND FORGING SOLUTIONS FROM BASIC STEELS TO COMPLEX ALLOYS

JADCO utilizes an extensive network of world-class foundries and forging facilities to provide flexibility for casting and forging requirements in a vast array of alloy types, although specializing in wear and abrasion applications.

JADCO can supply castings ranging in size from a few ounces to more than 30,000 lbs. Forgings are available up to several hundred pounds as forged and can be rough-machined or machined complete per specifications.

Available Materials:

- | | | | |
|-------------------|-------------------|----------------|-----------|
| > Carbon Steel | > Stainless Steel | > Ductile Iron | > Ni-Hard |
| > Low Alloy Steel | > Grey Iron | > Manganese | |



PROVEN PROTECTION... FOR **IMPACT** AND **ABRASION** CHALLENGES

HGTM WEAR BLOCKS **HARDGUARD** FOR THE **HARSHEST,** MOST ABRASIVE OPERATING CONDITIONS

HARDGUARD™ Wear Steel

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).

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.



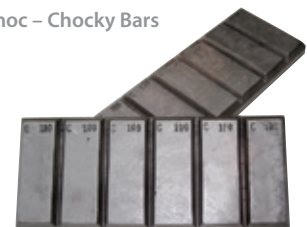
Typical Applications:

- > Buckets
- > Spider Arm Guards
- > Discharge Chutes
- > Rock Boxes
- > Grizzly Bars
- > Sugarcane Knife Edges
- > Adapters & Attachments
- > Dredging Equipment
- > Screen-Feed Distribution
- > Hoppers

HARDGUARD™ Types:

- > HardChoc – Chocky Bars
- > HardBar – Standard
- > HardBar – Shaped
- > HardEdge – Knife Edges
- > HARDGUARD™ Buttons
- > HARDGUARD™ Donuts
- > HardRoll – Roll Bars
- > HardTip – Shredder Tips
- > HardBoom – Boomerangs
- > HardPlate – Wear Plates
- > HardSkid – Skid Bars

HardChoc – Chocky Bars



HARDGUARD™ Buttons & Donuts





JADCO FLEXWEAR™ is the next level in wear resistance. This is an exceptional process used to create a metallurgical bond between tungsten carbide and the substrate via infiltration brazing.

FLEXWEAR™ uses tungsten carbide and a nickel brazing alloy in the form of "cloth" to make cladding complex shapes possible. The typical hardness is up to 72 HRC. The tungsten carbide is uniformly bonded and distributed throughout the nickel alloy matrix. Coating thickness ranges between 0.030" – 0.120".



The tungsten carbide and nickel brazing alloy has high levels of abrasion and erosion resistance due to the small particles used.



Typical Applications:

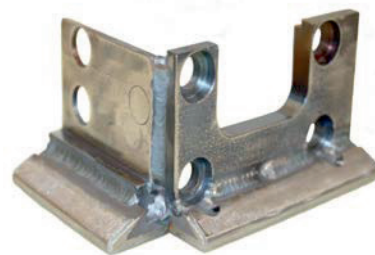
- > Impellers
- > Fan Blade Liners
- > Nozzles
- > Mixer Blades
- > Scraper Blades
- > Pin & Disc Pelletizer

Flexwear™ Benefits:

- > Longer Life
- > Less Downtime
- > Increased Production
- > Reduce Maintenance Costs
- > Increased Profitability
- > Smooth Wear Surface



Access Door




Centrifuge Wiper



Fan Nose Liner





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

- | | |
|-----------------------------|-----------------------------|
| > Mining | > Power Generation |
| > OEM | > Steel Mills and Foundries |
| > Material Handling | > Pulp and Paper |
| > Asphalt and Road Building | > Aggregates |
| > Tunneling | > Waste and Recycling |
| > Concrete and Cement | > Dredging |
| > Oil and Gas | > Agriculture |
| > Glass | > Air Handling |
| > Wastewater Treatment | > Sugar |

Our QT-PLUS® Wear Steel has up to *3-5 times wear life* of commodity AR400 wear steel, making it ideal for a wide range of plates and liners requiring high hardness and tensile strength.

Our CHROMEWELD™ Family of Overlay Wear Steels, offer unique materials with consistent chemistries that reduce severe abrasion challenges of liners, plates, hoods and wear parts.

Our HARDGUARD™ Wear Steel is an extremely hard, laminated bi-metallic composite with chrome-moly white iron bonded onto a mild steel backing plate. Available in a wide array of shapes, it has a 63 HRC (minimum) alloy hardness and can be custom-designed and fitted to your exact application.

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 • Zelienople, PA 16063
phone: 724-452-5252 • fax: 724-452-1318

JADCOMFG.COM

ISO 9001:2015

