



**ROCKMOUNT**  
Research and Alloys, Inc.

# Product Reference Guide

Designed to Weld Stronger and Last Longer.

[Rockmountwelding.com](http://Rockmountwelding.com)

## Company Overview

Since 1972, Rockmount Research and Alloys has been the leader in maintenance welding products. Using Rockmount products in combination with our technical expertise, our customers make stronger, longer lasting repairs – saving significant time, money and aggravation by reducing costs associated with downtime, labor and replacement parts.



### MADE FOR MAINTENANCE

Easy, out-of-position welding on contaminated metals in the toughest of environments.



### A PRODUCT FOR EVERY JOB

The right alloys for every base metal and every welding process.



### WE KNOW WELDING

Our Sales Representatives are technically trained to bring more to your shop than just products.



### SAVE TIME & MONEY

Reduce downtime and labor by making faster, stronger repairs that last longer

## Industries We Serve

Every year we serve thousands of customers across a broad range of essential industries including farming, construction, mining, processing, manufacturing and city, county, and state maintenance shops.

We are proud to be a trusted partner in repairing and maintaining our customers' most essential equipment.

## Product Range Overview



### ARC RODS (SMAW) – Page 3

Arc rods are a must for maintenance welders. Strong, flexible, easy-to-use and great for dirty out-of-position applications.



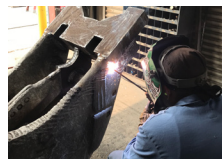
### MIG WIRES (GMAW) – Page 6

Wires made specifically for maintenance welders. Stronger, more durable welds without the need for perfect preparation.



### FLUX CORE WIRES (FCAW) – Page 7

Smooth running and extremely durable in the toughest conditions. Perfect for when downtime isn't an option.



### HARDFACING & WEAR PLATES – Page 8

Durability and faster application times make our hardfacing the most economical way to protect your equipment.



### TIG ALLOYS (GTAW) – Page 10

Designed for clean or contaminated applications where extra high durability, corrosion or wear resistance is required.



### BRAZING, SOLDERS & POWDERS – Page 12

Superior gas products that save time and money by enabling you to repair the parts you previously would have replaced.



### THREAD REPAIR & BOLT REMOVAL – Page 15

The simplest, most cost-effective and permanent way to repair stripped threads and extract broken bolts.



### ABRASIVES & METALWORKING – Page 16

Abrasives and drill bits built to run cooler, last longer, and cut quicker with safety and cost effectiveness in mind.

# Arc Rods (SMAW)

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PRODUCT	BASE METAL	INTENDED USE	KEY FEATURES	CURRENT	STRENGTH / HARDNESS (UP TO)
<b>Brutus AAA</b>	All Steels	For the highest-strength joining of any type of steel. Ideal for unknown or dissimilar steels. Can be used for broken bolt extraction.	Corrosion, wear and shock resistant. Easy strike, restrike, and slag release. Superior operating characteristics and elongation (37%).	AC/DCEP	127,000 PSI
<b>Brutus A</b>	All Steels	For high-strength joining of any type of steel. Ideal for unknown or dissimilar steels. Can be used for broken bolt extraction.	Ideal for dissimilar steels. Wear and shock resistant, prevents undercutting. Excellent corrosion resistance and elongation (35%).	AC/DCEP	125,000 PSI
<b>Polaris AAA</b>	Mild/Med Steel	For crack sensitive applications and high strength alloy or problem steels. Ideal for construction and mining equipment. A superior alternative to standard 7018.	Moisture resistant, extra-low hydrogen flux with excellent AC stability and high ductility (34%). Excellent sub-zero properties. Effective on contaminated steels.	AC/DCEP	98,000 PSI
<b>Polaris A</b>	Mild/Med Steel	For use on construction equipment, truck/bus frames, or crack sensitive steels. Ideal for applications involving impact or vibration. A superior alternative to standard 7018.	Moisture resistant, low hydrogen flux. High impact resistance with great ductility (33%). Produces sound, heat-treatable welds even on contaminated steels.	AC/DCEP	95,000 PSI
<b>Polaris 18</b>	Mild/Med Steel	For repair, joining or fabrication of construction grade steel.	A low hydrogen rod, with smooth running characteristics and easy restrike. Meets and exceeds AWS E-7018 specifications.	AC/DCEP	82,000 PSI
<b>Tartan AAA</b>	Mild/Med Steel	For welding mild and low alloy steels on dirty, rusty or wet surfaces. High performing alternative to 6010 or 6013. Welds well even out of position. Ideal for service truck use.	Smooth running on contaminated steel. Moisture-resistant flux is extremely durable even if the rod is bent or wet. Good elongation (28%). Welds in the most difficult situations.	AC/DCEP	86,000 PSI
<b>Tartan B</b>	Mild/Med Steel	For joining light or heavy gauge mild steel. Ideal for welding pipe in tight corners or overhead. Great on galvanized steel. Superior replacement for standard 6011.	Deep penetration, wide amperage range. Welds through dirt, rust, paint, and slag without porosity. Excellent out of position.	AC/DCEP	80,000 PSI

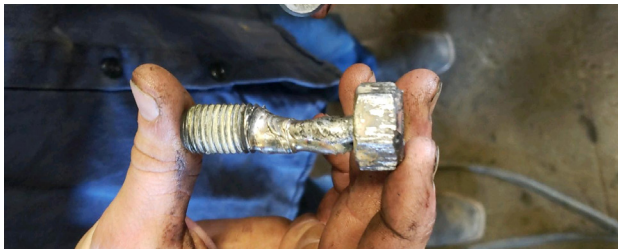
# Arc Rods (SMAW)

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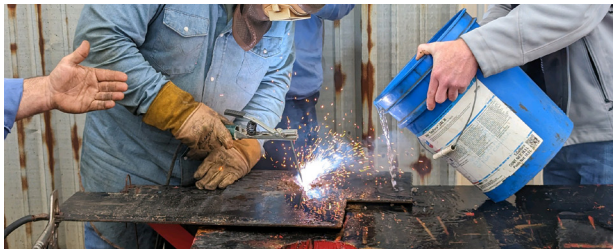


PRODUCT	BASE METAL	INTENDED USE	KEY FEATURES	CURRENT	STRENGTH / HARDNESS (UP TO)
<b>Apollo A</b>	Manganese Steel	For build-up and wear surfacing of all low alloy carbon steels and manganese. Unlimited deposit thickness, work hardens. Low friction surface.	Abrasion resistance under impact. Impact loads will work harden the surface. Ideal for metal to metal wear. Cuts with a torch.	AC/DCEP	135,000 PSI 55 RC
<b>Apollo B</b>	Manganese Steel	For joining dissimilar and manganese steels. Also for build up and hardsurfacing. Ideal for high impact applications.	High impact resistance with 37% elongation. Low hydrogen flux. Good corrosion resistance and hot hardness to 1000°F.	AC/DCEP	105,000 PSI 45 RC
<b>Gemini BBB</b>	Stainless	For joining and cladding most grades of stainless steel including molybdenum bearing types such as 316, 318, 303, 315 and 329.	Excellent for vertical down welding. Fast freeze deposits for poor fit-up joints or filling holes. Superior corrosion resistance.	AC/DCEP	80,000 PSI
<b>Gemini A</b>	Stainless	For joining and cladding non-moly stainless steels 301, 302, 302B, 303, 304, 304L, 305, 308L, 321, 347, and all AISI 200 & Ferrite 400 types.	Superior out of position. Extra low carbon content and low heat requirements with added stabilizers to reduce carbide precipitation problems.	AC/DCEP	85,000 PSI
<b>Gemini C</b>	Stainless/ Inconel/ Hastelloy	For joining and cladding nickel and steel alloys in highly corrosive applications. Ideal for Inconel, Hastelloy and stainless steels.	Extreme corrosion resistance to 2,000°F. Contains Tungsten. Retains hardness at high heat. Machinable.	AC/DCEP	121,000 PSI 40-45 RC
<b>Gemini E</b>	Stainless	Capable of welding any stainless steel. Ideal when the exact composition of stainless is unknown. Can be used to join steel to stainless.	Outstanding heat and oxidation resistance, high strength and ductility.	AC/DCEP	85,000 PSI
<b>Gemini I</b>	Inconel	For joining and cladding Inconels in high stress, crack sensitive applications at extremely low or highly elevated temperatures up to 2000°F.	Resistance to pitting, crevice and corrosion cracking at wide temperature range. Ideal for seawater or highly acidic/oxidizing environments.	AC/DCEP	137,000 PSI
<b>Electra AAA</b>	Arc Gouging	Highly versatile arc gouging and cutting rod that does not require compressed air or oxygen. For use on all metals except magnesium. Use with your existing arc welder.	Cut, pierce and gouge quickly with standard welding equipment. No compressed air required. Perfect tool for removing welds or beveling in the shop or field.	AC/DCEN	
<b>Jupiter AAA</b>	Cast Iron	For the highest strength cast iron repairs, and for welding steel to cast iron. Effective on contaminated surfaces.	Electrode will not overheat. Deposits are smooth with excellent tie in between passes. High nickel content. Machinable deposit.	AC/DCEP	75,000 PSI

PRODUCT	BASE METAL	INTENDED USE	KEY FEATURES	CURRENT	STRENGTH / HARDNESS (UP TO)
<b>Jupiter A</b>	Cast Iron	For the high strength cast iron repairs, and for welding steel to cast iron. Effective on contaminated surfaces.	Welds over dirt and oil. Ideal for large pieces and build-up. High strength and low heat input. Non-conductive flux.	AC/DCEP	70,000 PSI
<b>Jupiter BBB</b>	Cast Iron	Welds all weldable grades of cast iron. Produces soft machinable welds. Ideal for welding out of position and in tight spots.	Non-conductive flux won't side arc, excellent machinability, welds through contaminants.	AC/DCEP	55,000 PSI
<b>Neptune AAA</b>	Aluminum	For welding or joining any weldable aluminum. Excellent on contaminated aluminum, and for joining dissimilar grades of aluminum.	High deoxidizer content allows Neptune to be used on contaminated aluminum with greatly increased strength and elongation.	DCEP	36,000 PSI
<b>Midas M2</b>	Tool Steel	For surfacing high-speed tool steels and cutting edges. High hardness and excellent friction resistance.	Tool steel alloy is self-hardening and allows rebuild of expensive tools. Can form or overlay cutting edges.	AC/DCEP	64 RC
<b>Midas H12</b>	Tool Steel	For surfacing hot and cold working tool steels, oil, air or water hardening. For cutting edges and abrasion surfaces.	Tool steel deposits resist shock and abrasion at elevated temperatures. Responds to heat-treatment. Restores tools and dies.	AC/DCEP	59 RC
<b>Venus A</b>	Bronze/Brass	For joining and overlays on copper, brass and bronze. Also ideal for joining steel to copper or copper alloys and other difficult weld repairs.	Forms an excellent wear surface and is highly resistant to corrosion. Copper-tin alloy is machinable and ductile with good strength.	DCEP	50,000 PSI
<b>Venus B</b>	Bronze/Brass	Phosphor bronze electrode for joining or overlays on copper, brass, bronze, steels and dissimilar combinations.	May be used in AC or DC. Machinable deposit. High corrosion resistance to salt water and chemicals. Wear resistant.	AC/DCEP	63,000 PSI
<b>Venus C</b>	Bronze/Brass	High strength aluminum bronze electrode for joining and wear resistant deposits. Will join dissimilar combinations and bronze alloys.	High alloy content resists shock and frictional wear. Machinable deposit work hardens. Corrosion resistance to salt water and chemicals. Ideal for welding dissimilar metals.	DCEP	106,000 PSI



Brutus AAA can weld any steel and pull broken bolts.



Tartan AAA will weld through paint, grease and water.



Electra AAA airless gouging rod is a quick way to remove a weld.

# MIG Wires (GMAW)

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PRODUCT	BASE METAL	INTENDED USE	KEY FEATURES	SHIELDING	STRENGTH / HARDNESS (UP TO)
<b>Brutus MIG</b>	Steel	For welding all steels – spring, mild, free machining, tool steels, stainless, manganese and cast steels. Ideal for welding dissimilar or unknown steels.	Corrosion, crack and shock resistant. Superior strength. Machinable build up. Avoids porosity. Excellent elongation (35%)	Argon-O2 Tri-Mix	130,000 PSI
<b>Polaris MIG</b>	Steel	For welding high strength, low-alloy steels, low and medium carbon steels and problem steels.	Excellent for high strength, crack resistant welds. Ideal for out of position welding. High elongation (33%). Excellent for applications in high vibration areas.	CO2 Argon-O2 Argon-CO2	100,000 PSI
<b>Tartan MIG</b>	Steel	For welding mild and medium low-alloy carbon steels, including contaminated metals. Ideal for out of position welding.	Welds through rust, oil, grease or paint with ease. High strength and elongation (27%). High deposition efficiency.	CO2 Argon-O2 Argon-CO2	80,000 PSI
<b>Tartan B MIG</b>	Steel	Ideal for repair welds on mild and medium alloy steels, including contaminated metals. Excellent for welding on rust, mill scale, and great on galvanized steel.	Achieve good results under adverse conditions of dirty, rusty steels. Excellent wetting action and high elongation. Superior out of position characteristics.	CO2 Argon-O2 Argon-CO2	80,000 PSI
<b>Gemini 316L MIG</b>	Steel	For welding type 316L stainless and other molybdenum-bearing stainless steels.	Molybdenum-bearing stainless alloy. High chromium-nickel content provides excellent corrosion resistance.	Argon-O2 Tri-Mix	88,000 PSI
<b>Neptune MIG</b>	Aluminum	For welding or joining aluminum sheets, extrusions, pipe and castings. Suitable for a wide range of aluminum alloys and unknown types.	High tensile strength with good elongation (27%). Provides color match and may be anodized. Avoids porosity. Resists corrosion. Welds all weldable grades of aluminum.	Argon Argon-Helium	40,500 PSI
<b>Venus MIG</b>	Bronze/Brass	For welding bronze, brass, copper, cast iron, steel and dissimilar combinations. Excellent for welding galvanized steel.	Good color match on bronze and corrosion resistance. Smooth, machinable deposit. Joins steel to copper or brass alloys.	Argon Argon-Helium	60,000 PSI
<b>Jupiter MIG</b>	Cast Iron	Welds all cast irons, and welds steel to cast iron. Ideal for cast pump housings and other contaminated applications.	Great results on contaminated cast iron. Highly machinable, smooth running, pinhole and side-crack resistant.	Argon-O2 Tri-Mix	60,000 PSI

# Flux Core Wires (FCAW)



PRODUCT	BASE METAL	INTENDED USE	KEY FEATURES	CURRENT	SHIELDING	STRENGTH/ HARDNESS (UP TO)
<b>Brutus FC</b>	All Steels	Welds any steel, including carbon, spring, stainless and tool steels and all dissimilar steels. Ideal for crack sensitive, high vibration equipment, and one-sided welds.	Smooth running, excellent out-of-position characteristics, and an incredible combination of tensile strength and ductility (35%).	DCEP	CO2 Argon-CO2	125,000 PSI
<b>Polaris Ultra FC</b>	Steel	For welding mild, medium, low alloy and AR plate. Out of position vertical up or down. Ideal for field welding of heavy equipment in adverse conditions.	High strength, high elongation, 28%, and X-ray quality welds without gas. Low spatter and smooth running. Deoxidizers counteract the effects of contaminants.	DCEN	Self-Shielded	95,000 PSI
<b>Polaris Maxi-Shield Pro</b>	Steel	For welding high strength, low alloy and medium carbon steels. Also joins wear resistant steels and can be used for build-up. High ductility. Ideal for mining and construction equipment.	Superior for vertical or overhead applications. High deposition rate with x-ray quality welds. Porosity free even on contaminated applications. Up to 28% elongation.	DCEP	CO2 Argon-CO2	90,000 PSI
<b>Tartan FC</b>	Steel	General purpose wire for welding thin carbon steels whether clean or contaminated. No gas required. Ideal on galvanized steel.	Designed for single pass applications with low spatter and good wetting action. Excellent vertical. Excellent elongation. Up to 96-98% deposition efficiency.	DCEN	Self-Shielded	80,000 PSI
<b>Gemini B FC</b>	Stainless	For joining and build-up on most stainless steels including molybdenum types such as 316, 316L, 318. Excellent for out of position.	Molybdenum-bearing high alloy provides superior corrosion resistance with x-ray quality welds. High deposition rate, easy to use.	DCEP	CO2 Argon-CO2	85,000 PSI



Polaris Ultra FC is ideal for field welding in adverse conditions.



Polaris Maxi Shield is great out of position and in cold climates.



Welding galvanized steel to rusty steel using Tartan B MIG

# Hardfacing and Wear Plates

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## Hardfacing and Build-Up – Arc Rods (SMAW)

PRODUCT	INTENDED USE	KEY FEATURES	Current	STRENGTH/ HARDNESS (UP TO)
<b>Apollo A</b>	For build-up and wear surfacing of all low alloy, carbon, and manganese steels. Unlimited deposit thickness, work hardens. Low friction surface.	Abrasion resistance under impact. Impact loads will work harden the surface. Ideal for metal to metal wear. Cuts with a torch. Good ductility (30%). Excellent compaction strength.	AC/DCEP	135,000 PSI Deposit 11 RC Hardens 55 RC
<b>Apollo B</b>	For joining dissimilar steels with manganese present. Also for build-up and hardsurfacing. Ideal for high impact applications.	High Impact resistance and excellent compaction strength. Low hydrogen flux. Good corrosion resistance and hot hardness to 1,000°F. Outstanding ductility (37%)	AC/DCEP	105,000 PSI Deposit 20 RC Hardens 45 RC
<b>Zeta C</b>	For extreme abrasion resistance even when accompanied with moderate impact. Greatly extend the service life of equipment subjected to high wear including chutes, buckets, ground engaging tools, rock crusher parts and skids.	Incredibly cost effective and long wearing hardfacing results. Fast deposition and high recovery rates rival wire feed, with up to 62 RC first pass hardness. Use half the amount of rod and get twice the wear. Two pass max.	AC/DCEP	58-62 RC
<b>Omega N</b>	For abrasion resistance in high impact applications. Can be used on all ferrous metals. Holds hardness at high temperatures.	Deposits are ultra-smooth and provide a low friction surface. High deposition rate and easy slag removal. High chromium content and excellent corrosion resistance.	AC/DCEP	60-62 RC
<b>Olympia A</b>	Universal hardfacing alloy for resistance to both abrasion and impact. Effective on carbon and low alloy steels, manganese steels and cast iron.	Produces a self-hardening deposit. High deposition rate significantly lowers application cost. Excellent out of position. Can be used for build-up.	AC/DCEP	60 RC
<b>Olympia B</b>	For build-up or hardfacing on extreme abrasion applications with low impact. For carbon and low alloy steel, manganese steels and cast iron.	Deposits contain hard chromium and silicon carbides. Excellent out of position. Corrosion resistant.	AC/DCEP	66 RC
<b>Orion B</b>	Chromium-free hardfacing rod made for extreme abrasion applications with mild impact.	A super smooth running boron carbide alloy with over 90% efficiency and high single-pass hardness. Extreme abrasion resistance without chromium.	AC/DCEP	64-68 RC



## Hardfacing and Build-Up – Flux Core Wires (FCAW)

PRODUCT	INTENDED USE	KEY FEATURES	SHIELDING	STRENGTH/ HARDNESS (UP TO)
<b>Apollo FC</b>	For build-up and wearfacing on manganese steels where heavy impact and abrasion resistance is required. Ideal for metal to metal wear applications, or as an underlayment for other hardfacing.	Combines strength, ductility and crack resistance while work hardening under impact. Unlimited deposit thickness, can be flame cut. Up to 40% elongation.	Self-Shielded	120,000 PSI Deposit 15 RC Hardens 55 RC
<b>Olympia B FC</b>	Hardfacing for carbon and alloy steels, cast iron and manganese in extreme abrasion applications with moderate impact.	High alloy content produces superior hardness up to 1,200°F. Excellent out of position characteristics and high recovery rate ensures there will be little waste.	Self-Shielded	62-65 RC
<b>Orion FC</b>	Chromium-free hardfacing for carbon and alloy steels, cast iron and manganese in extreme abrasion applications with moderate impact.	A super smooth running boron carbide alloy with over 90% efficiency and high single-pass hardness. Extreme abrasion resistance without chromium.	Self-Shielded	60-65 RC
<b>Omega FC</b>	General purpose hardfacing for all ferrous metals, providing excellent abrasion resistance even under impact.	High chrome content resists abrasion and impact. High bead contour and deposition rate. Magnetic.	Self-Shielded	50-54 RC
<b>Zeta FC</b>	Hardfacing for carbon, alloy and stainless steels in high abrasion applications even with heavy impact.	Excellent running characteristics especially out of position. Rapid deposition. Tough, dense deposit allows multiple passes. High chromium content resists corrosion. Gas required.	CO2 Argon-CO2	55-60 RC

## Wear Plates

PRODUCT	INTENDED USE	KEY FEATURES	SHIELDING	STRENGTH/ HARDNESS (UP TO)
<b>Zeta Wear Plates</b>	Heavy duty wear plates for high abrasion applications where a large area must be covered quickly. Come in various shapes and sizes.	Composed of 1/4" chrome carbide fused to a 1/4" mild steel. The material is bendable and can be cut with a plasma torch.		59-60 RC
<b>Olympia Wear Plates</b>	General purpose wear plates for high abrasion applications with low impact. Perfect for snow plows, sweepers and mower skids.	The through hardened steel plates are 3"x 6" x 3/16" with a plug hole cut in the center for quick and easy attachment.		61-64 RC

# TIG Alloys (GTAW)

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PRODUCT	BASE METAL	INTENDED USE	KEY FEATURES	CURRENT	STRENGTH/ HARDNESS (UP TO)
<b>Brutus TIG</b>	Steel	For welding all steels: spring, mild, high carbon, alloy, tool steel, cast steels, manganese and stainless.	Corrosion and shock resistant. Ideal for unknown or dissimilar steels and machinable build-up. Good puddle fluidity.	DCEN	130,000 PSI
<b>Gemini A TIG</b>	Steel	For stainless types 304, 304L, 308, 308L, AISI 200 and Ferrite 400 types. Joining and cladding. Ideal for most stainless.	Excellent corrosion resistance with low carbon. Avoids carbide precipitation. Ideal for use in chemical, refining and food applications.	DCEN	85,000 PSI
<b>Gemini B TIG</b>	Steel	For stainless types 316, 316L, 318 and other molybdenum-bearing types. Joining and cladding with superior corrosion resistance.	Molybdenum-bearing alloy excellent for fabrication and repair to resist brine, organic acids, and sulfuric acids. Ultra low carbon.	DCEN	83,000 PSI
<b>Gemini C TIG</b>	Steel	For stainless joining and overlay in severe corrosive conditions. Suitable for carpenter stainless and high temperatures.	Excellent results on stainless exposed to severe conditions. Ideal for applications in the refinery, chemical and plastics industries.	DCEN	86,000 PSI
<b>Gemini E TIG</b>	Steel	For joining high chrome/nickel types of stainless and unknown types. Also steel to stainless. 309, 310, 314 and Martensitic 400 types.	Highest chrome and nickel alloy. Outstanding, heat and oxidation resistance. Good strength to 2,000°F. 33% elongation.	DCEN	85,000 PSI
<b>Tartan TIG</b>	Steel	For mild and medium alloy steels and heat-treatable low alloys. High strength, quick freezing deposits, excellent out of position.	Contains deoxidizers to provide porosity-free welds. Flame hardenable, responds to heat treat, bluing and plating. Machinable. Can also be used for brazing.	DCEN	90,000 PSI
<b>Tartan B TIG</b>	Steel	For mild and medium alloy steels. Extra deoxidants produce porosity-free welds on contaminated steels. Excellent out of position.	Excellent puddle fluidity. Where deposit machinability is required, it is the clear choice. Good ductility. Copper flashed.	DCEN	80,000 PSI
<b>Jupiter B TIG</b>	Cast Iron	For joining cast iron and cast iron to steel. Also for build-up on cast iron with superior machinability. Good control of deposit thickness.	High nickel content with strong, dense, fully machinable deposits on all weldable cast irons. Easy to use, porosity free.	DCEN	60,000 PSI

PRODUCT	BASE METAL	INTENDED USE	KEY FEATURES	CURRENT	STRENGTH/ HARDNESS (UP TO)
<b>Neptune TIG</b>	Aluminum	For welding aluminum sheets, extrusions, pipe and castings. Most suitable alloy for a wide range of aluminum alloys and unknowns.	Minimum crack sensitivity and excellent color match. Avoids porosity, good puddle fluidity. May be anodized.	AC/High Freq.	34,000 PSI
<b>Neptune M TIG</b>	Magnesium	For magnesium-cast, sheet or tubing. Joining or build-up. Excellent color match.	Fast and easy to use to weld a variety of magnesium components. Good strength and no porosity.	AC/High Freq.	37,000 PSI
<b>Venus TIG</b>	Brass/Bronze	For bronze, brass, cast iron, steel, or dissimilar combinations. Produces long wearing, machinable, low friction surfaces.	Color match on bronze and good corrosion resistance. Excellent wetting action. Deposits are long wearing.	DCEN AC/High Freq.	60,000 PSI
<b>Venus C TIG</b>	Brass/Bronze	For joining or overlays on bronze, brass and steels as well as dissimilar combinations. Superior for machinable buildup.	A high alloy aluminum bronze ideal for a wide range of applications. Excellent corrosion resistance to chemicals and salt water. Machinable deposit.	DCEN AC/High Freq.	106,000 PSI
<b>Midas M2 TIG</b>	Tool Steel	For surfacing high speed tool steels and cutting edges. High hardness and excellent friction resistance.	Tool steel alloy is self-hardening and allows rebuild of expensive tools. Form or overlay cutting edges.	DCEN	64 RC
<b>Midas H12 TIG</b>	Tool Steel	For surfacing hot and cold working tool steels: oil, air or water hardening. Cutting edges and abrasion surfaces.	Tool steel alloy deposit resists shock and abrasion at elevated temperatures. Responds to heat treat. Restores tools and dies.	DCEN	59 RC



Brutus TIG used here to construct a chromoly steel roll cage. Brutus can weld any steel.



Neptune TIG is ideal for unknown aluminums or when pre-cleaning is difficult.



Tartan TIG was used to make this flawless weld on a high-pressure hydraulic application.

# Brazing, Solders and Powders

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## Brazing

PRODUCT	BASE METAL	INTENDED USE	KEY FEATURES	MELTING TEMP.	STRENGTH/HARDNESS (UP TO)
<b>Brutus G</b>	All Metals (except White)	Gas brazing alloy for all ferrous and non-ferrous metals (except white). Great results on steel, cast iron or tungsten applications. Ideal for hydraulic lines, tool bits, pump housings, engine blocks.	Low temperature brazing alloy for thin, exceptionally high strength joints. The nickel silver content aids wetting action and the flux coating is exceptionally durable.	1575°F (857°C)	100,000 PSI
<b>Olympia G</b>	All Metals (except White)	Gas brazing for cast irons, steel, brass, bronze and tungsten. Good for high strength joining. For tinning on oil tools, build-up on gear teeth and other metal to metal wear areas.	Strong and tough work hardening alloy. Excellent for metal to metal wear applications where shock is a factor. Low heat and good on dirty metals.	1550°F (842°C)	87,000 PSI
<b>Jupiter G &amp; GB (no flux coat)</b>	All Metals (except White)	General purpose gas brazing rod for ferrous and non-ferrous metals (except white). Good for contaminated steel, cast iron and galvanized metals.	High strength and high elongation (28%). Machinable and easy running, even on contaminated metals.	1590°F (866°C)	75,000 PSI
<b>Tartan G</b>	Steels	Used for welding a wide variety of carbon and alloy steels. Good for applications where post-weld heat treatment, blueing or plating is required.	Produces high strength, porosity-free, x-ray quality welds. Has superior impact resistance, and works excellent out of position. Can also be used for TIG welding.	1950°F (1065°C)	95,000 PSI
<b>Jupiter GC</b>	Cast Iron	For all grades of cast iron. Ideal for filling porous areas, build-up or joining. Deposits similar properties to base metal.	A bare cast iron rod that produces a machinable deposit with an excellent color match. For salvage and repair.	1650°F (899°C)	45,000 PSI
<b>Neptune G</b>	Aluminium	Gas brazing alloy for all types of aluminum including cast, sheet, and tubular. Good for thin aluminum, radiators, tubes, and irrigation piping.	Neptune is a low heat and high strength alloy for all weldable types of aluminum. Easy to apply and extremely durable results. Excellent color match.	1050°F (565°C)	34,000 PSI

PRODUCT	BASE METAL	INTENDED USE	KEY FEATURES	MELTING TEMP.	STRENGTH/HARDNESS (UP TO)
<b>Neptune GCF</b>	Aluminium	Flux cored aluminum brazing alloy requires no additional flux. Ideal for building up sections, joining cast or dirty aluminum.	High active flux cleans and avoids oxidation. Low temperature minimizes danger of melting base metal.	1050°F (565°C)	34,000 PSI
<b>Olympia GT</b>	Hardfacing	Tungsten brazing alloy where a cutting surface is required. Ideal for cutting tools, reamers, stabilizers and oilfield tools. Deposits cut ceramic, concrete and all metals.	Nickel and silver alloy with virgin tungsten carbide particles suspended throughout rod. With near diamond hardness, deposits are longer lasting and an economical replacement for standard carbide materials used in oilfield tool repairs.	1575°F (857°C)	Tungsten Particles

## Silver Brazing

PRODUCT	BASE METAL	INTENDED USE	KEY FEATURES	MELTING TEMP.	STRENGTH/HARDNESS (UP TO)
<b>Gemini G &amp; GB</b>	All Metals (except White)	For silver brazing on all metals (except white). Commonly used for stainless applications in hospitals, food processing or service. Great for hydraulic lines, radiators, or electric motor rewind repairs.	Extra low heat requirements producing strong, thin flowing, and easy to use materials. Incredibly durable flux coating, cadmium free, and 55% silver content. Excellent color match on stainless.	1090°F (588°C)	88,000 PSI
<b>Apollo G &amp; GB</b>	All Metals (except White)	Silver brazing alloy for all metals except white. Good for stainless steel, cast iron, radiators, goosenecks, and hydraulic lines/tanks.	High strength with low heat requirements and high silver content. Durable flux makes it especially easy to use.	1085°F (585°C)	88,000 PSI
<b>Venus G</b>	Copper Alloys	Replaces Sil-Phos for HVAC, refrigeration, medical gas lines and other applications where copper bearing alloys are used.	Higher strength, lower melting, and flowing temperatures than Sil-Phos. Low application temperatures reduce oxidation making Venus G easier to use. Works without pin holing even when the base metals can't be properly prepared.	1175°F (635°C)	52,000 PSI

## Soldering

PRODUCT	BASE METAL	INTENDED USE	KEY FEATURES	MELTING TEMP.	STRENGTH/HARDNESS (UP TO)
<b>Gemini S, Gemini SA Gemini SR</b>	All Metals (except White)	Sliver bearing solder for all metals (except white) including stainless, copper, bronze, brass. Low temperature and stronger than ordinary solder. Ideal for food grade applications.	Contains no lead, zinc or cadmium. Corrosion resistant, stainless color match. Gemini-SA is acid core, GeminiSR rosin core. Can be used with torch, iron or furnace.	420°F (215°C)	16,000 PSI
<b>Gemini SSP</b>	All Metals (except White)	Silver solder paste for joining all metals including stainless, copper, bronze, brass. (No white metals). May be preplaced.	Lead free with pre-mixed acid type flux allows fast and certain results. Avoids overheating, corrosion resistant, and cadmium free.	420°F (215°C)	16,000 PSI
<b>Neptune S</b>	Aluminum	For soldering aluminum sheet or cast materials without the use of flux. Use to fill cracks or defects. Applies at low temperature.	Easy to use, can be applied without fear of melting base metal. Good color match, can be built up.	670°F (354°C)	32,000 PSI
<b>Neptune SS</b>	Aluminum	Low temperature solder for aluminum and joining aluminum to other metals, such as copper and stainless. Also for zinc die cast. Thin flow joints.	Easy to use and may be preplaced. Ideal for tubing and sheet. Avoids overheating of base metal.	320°F (180°C)	7,5000 PSI

## Spray Powders

PRODUCT	BASE METAL	INTENDED USE	KEY FEATURES	MELTING TEMP.	STRENGTH/HARDNESS (UP TO)
<b>Cryotherm Torch and Powders</b>	All Metals (except White)	Spray torch and a full variety of low temp spray powders in various levels of hardness. Ideal for shaft build up. Connects to standard oxy/acetylene rig. See PDF on our website for complete listing of available Cryotherm powders.	High-quality, nitrogen aspirated metalizing powders for every application. These powders go on at a low temperature, below 500°F, so shafts do not warp. Deposits are dense, machine or grind beautifully, and commonly outwear the original base metal because of the deposits ability to retain lubrication.	Various	Various
<b>Unitherm Torch and Powders</b>	All Metals (except White)	High temperature fusion torch and a wide range of powders for joining, build-up and hardfacing on steel and cast iron applications. See PDF on our website for complete listing of powders is available.	High temperature fusion torch that sprays powders using a standard oxy/acetylene rig. Highly versatile, with powders range in hardness from 10 RC to 65 RC with tungsten and can be applied as thin as .003.	Various	Various

# Threaded Inserts

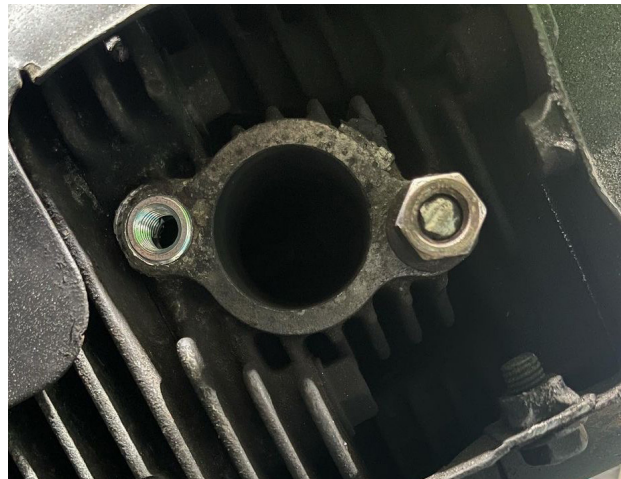
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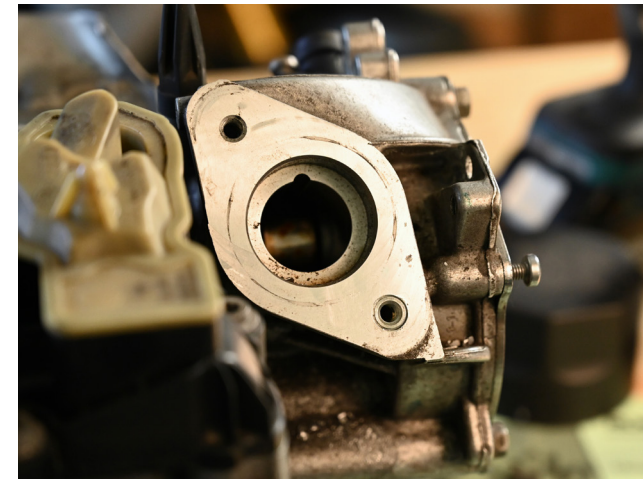
PRODUCT	OVERVIEW	KEY FEATURES	AVAILABLE OPTIONS
<b>Threaded Inserts (Standard Wall)</b>	For easy and efficient repair of stripped threads without tapping or the need for special tools. To complete a repair all you need a nut, a bolt and an insert. Just drill the hole, then run-in the self-tapping and self-locking Insert.	Inserts are made of case-hardened steel. They are self locking, and provide high-quality, permanent, wear-resistant internal threads. They can be used on metals, plastics and fiberglass.	Available in fractional sizing (coarse and fine) from 6-32 up to 3/4"-16. Available in metric from 3mm-20mm. Multiple different kits also available.
<b>Threaded Inserts (Thin Wall)</b>	The exact same quality and function as Standard Wall Inserts, but with a thinner wall. These are ideal where space is limited and the insert may be near the edge of the housing. Small motors, transmission cases and landscaping equipment are examples.	Inserts are made of case-hardened steel. They are self locking, and provide high-quality, permanent, wear-resistant internal threads. They can be used on metals, plastics and fiberglass.	Available in fractional sizing from 1/4"-20 up to 1/2"-13. Available in metric from 6mm-12mm. Multiple different kits also available.



Thin wall insert (left) and Standard Wall Insert (right). Both have the same internal diameter.



Stripped thread repair on an exhaust port using a threaded insert.



A threaded insert was used to repair a stripped thread on this engine housing.



## Angle Grinder Abrasives

PRODUCT	OVERVIEW	AVAILABLE OPTIONS
<b>Grinding Wheels</b>	Built with a high thread count fiberglass mesh foundation and proprietary carbide formulation. These wheels run cooler and last longer than ordinary wheels. They are better balanced for less chatter, and produce significantly less abrasive dust.	Available in general purpose and high-performance formulations in 4", 4 1/2" and 6" diameters with nut or without.
<b>Cut Off Wheels</b>	Our combination of a high thread count fiberglass mesh foundation and a superior abrasive particle formula produce a long-lasting, cool running and fast cutting wheel.	Available in general purpose and high-performance formulations in 4 1/2" and 6" diameters with nut or without.
<b>Flap Discs</b>	Made of a high-quality fabric and superior abrasive particle formula. They are long-lasting and efficient for grinding, sanding and polishing. Remove rust, paint and other contaminants and grind on any metal including aluminum.	Available in 4", 4.5", 6" and 7" diameters in multiple grits both with nut or without. Large variety of options including general purpose, high density, trimmable and aluminum-specific.
<b>Quicker Strippers</b>	The safer, modern, and more efficient version of the old-fashioned wire wheel. Strips paint, decals, rust or mill scale from metal surfaces with little impact to the base metal.	Available 4 1/2" diameter with nut or without.
<b>PSP Interleaved Flap Disc</b>	The Prep-Shape-Polish (PSP) Interleaved Flap Disc combines flexible abrasive material with surface conditioning flaps to create a time saving disc that grinds and finishes in a single step.	Available in 60 Grit Coarse finish both with and without hub. Ideal for stainless steel, aluminum and soft metals.
<b>Wire Cup Brushes</b>	Heavy-duty knotted wire wheels with the ability to perform weld cleaning, spatter removal or descaling over large surface areas. These work effectively on steel, cast steel and cast iron.	Available in 2-3/4" and 4" diameters with a threaded arbor.

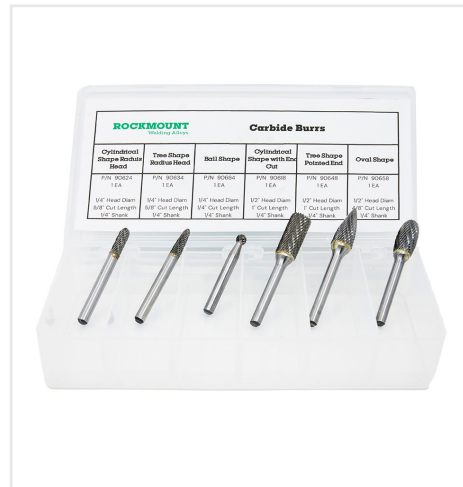


# Die Grinder/High-Speed Cutter Abrasives

PRODUCT	OVERVIEW	AVAILABLE OPTIONS
<b>Carbide Burrs</b>	High-quality double cut Carbide Burrs outlast the competition and cut quickly without gumming up.	Available individually in six unique shapes or all together in a single kit.
<b>Cut off Wheels</b>	Cool running and long-lasting these wheels have a superior fiberglass foundation for extra durability and safety.	Available in 3" and 4" diameters in both 0.35" and 1/16" thicknesses.
<b>Flap Discs</b>	Grinding, cleaning and polishing on metals of all types. High thread count fabric flaps and an advanced abrasive particle formulation produce a versatile, long-lasting, fast cutting abrasive.	Available in 2" and 3" diameters in various grits.
<b>Mounted Flap Wheels</b>	For deburring bores and tough-to-reach areas. Tough and long wearing fabric flaps and an advanced abrasive particle formulation.	Available in 1" and 2" diameters in various grits.
<b>Fiber Discs</b>	For high speed grinding. This fiber disc is made with the highest quality backing and carbides.	Available in 2" and 3" diameters in various grits.
<b>Conditioning Discs</b>	For dressing and polishing with minimal base metal removal.	Available in 2" and 3" diameters in extra coarse, medium and fine.



Mounted Flap Wheels



LaserBest Carbide Burrs



High Density (HD) Flap Disc



Electra Ultimate Cut Off Wheels

# Metalworking

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## Cutting Tools

PRODUCT	TOOL	OVERVIEW	AVAILABLE OPTIONS
<b>LaserBest Drill Bits</b>	Hand Drill or Press	Premium drill bits for all metal working applications. Made of the highest quality tool steel and an ultra-thin Duracore web. These are exceptionally fast cutting, cool running and long-lasting drill bits.	Available in 1/16" through 1" sizes either individually or in various kits. Left-handed drill bits and extractor sets are also available.
<b>LaserBest Step Reamers</b>	Hand Drill or Press	A convenient tool for expanding or deburring holes on most metals up to 1/2" thick. Made of the highest-quality tool steel and coated with gold oxide for lasting hardness and lubricity.	Available individually or in a 3pc kit. Each reamer has 5 precise hole sizes. Can expand holes from as small as 5/16" up to 1-1/16".
<b>LaserBest Hole Cutters</b>	Hand Drill or Press	Designed to cut clean holes in any metal up to 1" thick. These cutters feature a LaserBest pilot drill bit and ultra-hard tungsten carbide cutting teeth. With a built-in ejector spring, you can easily remove the slug and produce ready to use clean holes without burrs time and time again.	Available individually from 9/16" to 2" or in a 5pc kit.
<b>LaserBest Step Drill Bits</b>	Hand Drill or Press	High-quality cutting tool for deburring or expanding holes in sheet metals. Made of the highest-quality tool steel and coated with gold oxide for lasting hardness and lubricity.	Available individually or in a 4pc kit. Each Step Drill has several different steps designed to cover most common hole sizes.
<b>Chop Saw Blades</b>	Chop Saw	Built with the same structure and carbide formulation as our cut off wheels these are long-lasting and cool running. An exceptional value.	Available in 12" and 14" diameters.
<b>Slick Cut Saw Blades</b>	Reciprocating Saw	Reciprocating saw blades for thin and thick metals. These high-tech blades feature proprietary coatings to reduce heat and increase wear. Our testing has shown that these blades outlast standard blades 4 to 1.	Available in 8" and two different 6" options. Slick Cut Silver is a great overall blade that is efficient on stainless. Slick Cut White is designed for lighter gauge metals.
<b>Air Axe &amp; Electra Plus Bars</b>	Exothermic Cutting Torch	The Air Axe exothermic lance gun in combination with Electra Plus bars is the perfect tool for cutting, gouging and removing stuck pins on heavy equipment. It runs on oxygen and a 12V battery, so is portable and easy to set up in the field or shop.	Electra Plus bars come in multiple lengths and diameters. Bars can be bent for tough-to-get-to areas.

# Aids, Sprays and Lubricants

PRODUCT	TOOL	OVERVIEW	AVAILABLE OPTIONS
<b>Flamehold</b>	Heat Resistant Compound	Reusable heat resistant compound that can be used for welding, soldering or brazing. Excellent for use as a heat shielding compound to protect heat sensitive areas near your weld zone or as a fixture to hold parts together while working.	Available in 2# and 5# containers.
<b>Rapid Steel Epoxy</b>	Steel Epoxy Putty	Easy to use solution for small or emergency repairs. Bonds almost instantly with superior strength for rebuilds, repairs, and much more. Ideal for repairing and sealing holes or cracks. Can be filed, drilled or machined.	Available in a 4oz Steel-reinforced putty stick.
<b>Gemini Anti-Spatter</b>	Spatter Prevention Spray	Fast and convenient way to prevent spatter from sticking while welding. Make your equipment last longer by protecting MIG gun nozzles, tips, electrode holders or any area you wish to keep spatter free while welding.	Available in a 16oz aerosol can.
<b>LaserBest Cutting Fluid</b>	Drilling and Cutting Lubricant	High-quality cutting and drilling lubricant specially designed to increase the lifespan of your equipment in applications where cutting fluid is called for. Foaming action keeps lubricant in place reducing the need to reapply. Great for use with our LaserBest Drill Bits, Step Bits, Reamers and Hole Cutters.	Available in a 12oz aerosol can.
<b>Galv-Coat</b>	High Solid Zinc Spray	Easy to use spray that produces a coating of practically pure zinc fluid. Cold compound stops rust instantly by galvanic or electrochemical action. Also provides long lasting protection against further rusting or rust creepage.	Available in a 12oz aerosol can.
<b>Cryotherm Degreaser</b>	Residue-Free Degreaser	Instantly penetrates and removes dirt, oil, grease, wax, moisture and other contaminants. Evaporates completely leaving no residue behind. The spray is non-flammable, non-corrosive and non-staining.	Available in a 18oz aerosol can.



Flamehold heat resistant compound



LaserBest Step Reamers



High-performance sprays and lubricants



LaserBest Drill Bits

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## Contact Us

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To place an order please contact our office, visit our online store, or reach out to your local sales representative. Our team is on the phones from 8am to 4pm PST on workdays, so feel free to call. We look forward to connecting with you.

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