

CNC

ARCOS Bridge & Rail Plasma

Reliable turnkey solutions for any metal based application requiring consistency, productivity, performance, and versatility.



MULTICAM
Complete CNC Solutions

RUGGED, HEAVY-DUTY...

...HIGH-PERFORMANCE

ARCOS BRIDGE & RAIL PLASMA

The Arcos is designed for manufacturers who need to cut heavy plate or need a large processing area without sacrificing accuracy or cut quality. Arcos is a complete ground up design with the latest power supplies from Hypertherm and the latest automatic oxy fuel system from IHT. A well balanced design with a low profile while maintaining a whopping 8 ft. of cut clearance giving it a low center of gravity for optimal motion at 50% higher speeds and 200% faster accelerations than previous models. The Arcos system from MultiCam touts best in class motion for ultra smooth cuts, while utilizing all the latest process control libraries from valuable partners like Hypertherm and IHT.

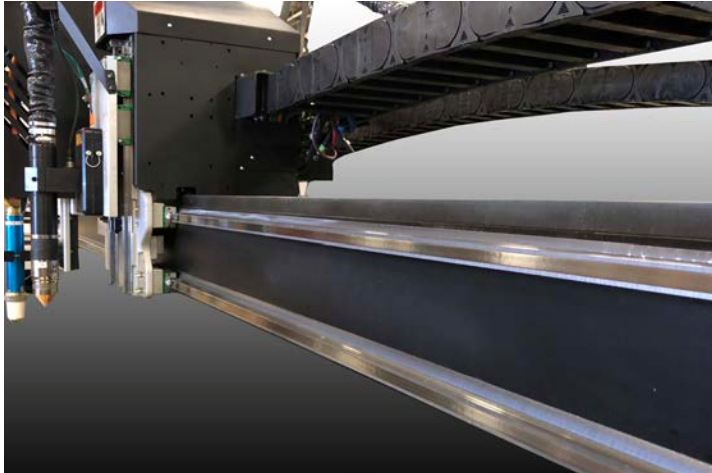


FEATURES & SPECIFICATION GUIDE

PERFORMANCE / EASE OF USE / PRODUCTIVITY

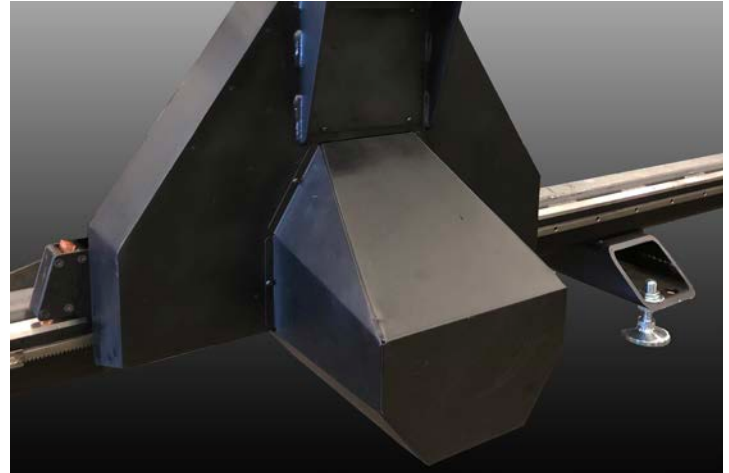
FEATURES

No machine offers more features than the innovative and versatile Arcos Bridge & Rail Plasma.



Gantry Engineered for Performance

The gantry is made of 1/4" thick square tubular steel that is welded, stress-relieved, and precision machined. The gantry has been engineered to provide a smooth, vibration free cut at optimal speeds and accelerations.



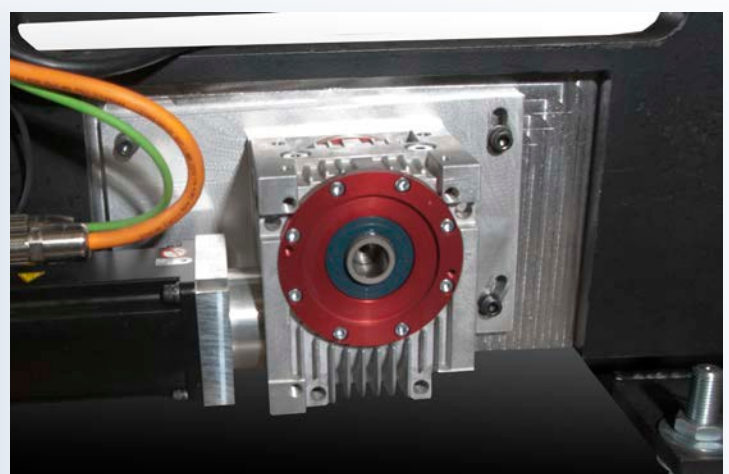
Gantry Supports High Strength, Minimal Vibration

The Arcos gantry supports are manufactured from cut steel plate. They are welded, stress-relieved, and precision machined. Wide X-Axis bearing spacing and heavy plate help dampen vibration and give the structural tube gantry extremely rigid support.



Modular Base Rails Rigid & Smooth

The MultiCam Arcos' modular base rails are made from 1/2" thick tubular steel. This extremely rigid base reduces vibration and allows for the best cutting quality using modular sections that can be added for longer machine lengths. The Arcos also includes integrated leveling feet and pre drilled bolt holes for easy anchoring.

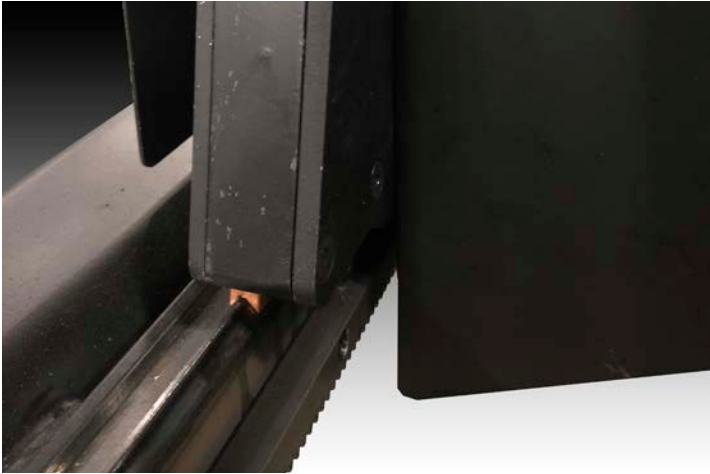


Precision GearBoxes (X-Axis) Solid, Heavy-Duty Construction with Helical Rack

These high torque, low backlash gearboxes are ideal for moving and positioning the precision gantry at high speeds and acceleration rates while still delivering smooth motion.

FEATURES

The Arcos delivers consistent accuracy and reliable control.



Guide Way System (X-Axis) **Smooth & Accurate**

MultiCam's legendary motion is a result of our manufacturing process. The Arcos Bridge and Rail features a combination V-rail capture and floating rail system that provides super smooth, accurate motion that will allow for our precise automatic squaring routine and glide effortlessly down the rails.



EZ Control **Easy-To-Use**

MultiCam's EZ Control is one of the most powerful yet easy-to-use motion control systems available on the market. It allows for multiple job reference positions, automatic Z surfacing, and proximity restart.



Linear Bearings (Y & Z Axes) **Precise & Sturdy**

The Arcos incorporates 25mm linear bearing profile rails with stainless steel strip cover for high rigidity and capacities in all load directions.



Digital Servo Drive System **Smooth & Reliable**

Digital Servo drives and brushless digital AC servo motors form a digital vector servo drive system that is standard on all 3000 Series machines. This drive system integrates position, velocity, and torque loops seamlessly to provide uncompromised tracking accuracy, smoothness, and reliability.



Oxy Torch (Option)

Versatile Performance

Maximize your manufacturing capabilities with this optional OxyFuel torches. These torches are rated to cut mild steel up to 8" thick. The IHT torches feature auto-gas, auto-ignition, auto-surface sensing, auto-height, auto-shutoff and auto-cut chart integration. The Arcos system seamlessly runs the latest IHT libraries for easy setup and operation.



Quick-Stop Crash Protection

Quick & Easy

The quick-stop crash protection torch holder protects your investment against serious damage. During the cut process it is possible for small parts to tilt up. If the torch hits these obstacles, the torch releases and shifts to the side. The machine will pause and allow the user to fix the problem before continuing on.

ADVANCED FEATURES

ADAPTIVE AUTOMATIC TORCH HEIGHT CONTROL

MultiCam has introduced one of the most advanced automatic torch height control systems on the market. The challenge was to make the torch height control extremely responsive when cutting thin metals and very smooth when cutting thick metals. To achieve the best cut quality possible it is critical to keep the torch to work distance very consistent. If the torch height control is too responsive on thick metals the cut edge quality will not be smooth. If the torch height control is not responsive enough when cutting thin metals the torch will not be able to adjust quickly enough. In some cases, the cut height will not be ideal and the torch may even crash into the material. Most competitive torch height control systems are independent from the motion controller and cannot automatically adapt to changes in cut speed and materials thickness.

The Arcos from MultiCam fully integrated height control system takes all of this into account and is critical to the smooth cut results. The sensitivity of the Torch Height control is automatically adjusted based on the current cutting parameters. MultiCam's integrated Torch Height Control gives the customer the best of both worlds; very fast response when cutting thin metals, smooth slower adjustments when cutting thick plate. The best part is that all of these adjustments happen automatically for the end user. Height control is an integral function of the controller itself, there are fewer parts, which translates into less maintenance cost.

AUTO REFERENCE VOLTAGE

Most systems have the user manually enter in a reference voltage for the torch height. The MultiCam system automatically samples and sets the voltage at the beginning of each program based on the material libraries as a known starting point. This results in a better cut, longer consumable life, and reduces the chance for error. Why is this important? Many parameters can affect the torch height voltage. Whether you're cutting faster or slower, the book value of the torch height voltage will change. It is nearly impossible for the end user to guess the correct voltage. MultiCam eliminates this guess work by automating this process so you can spend your time on production.

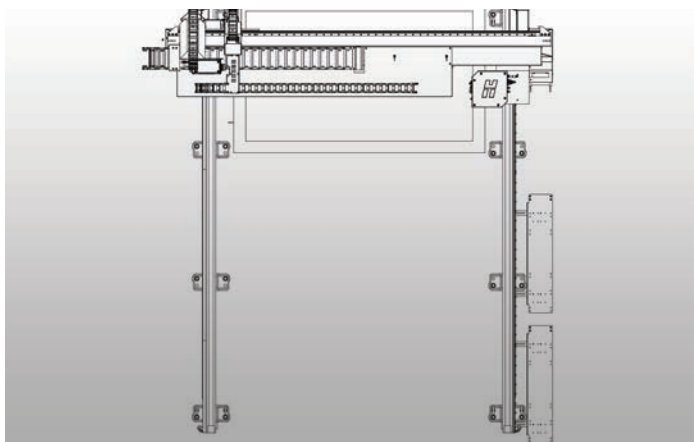
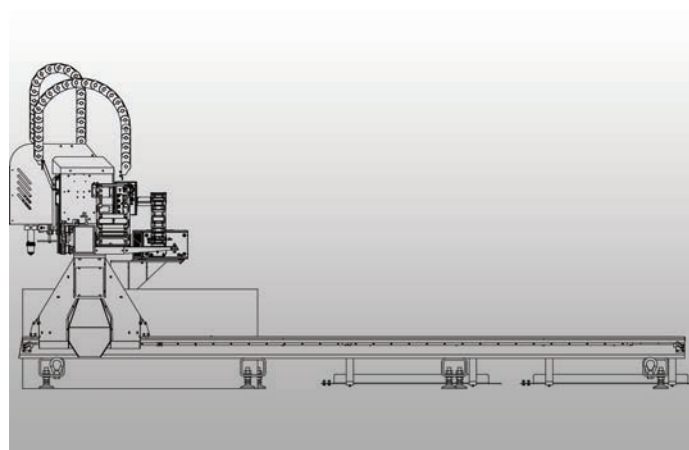
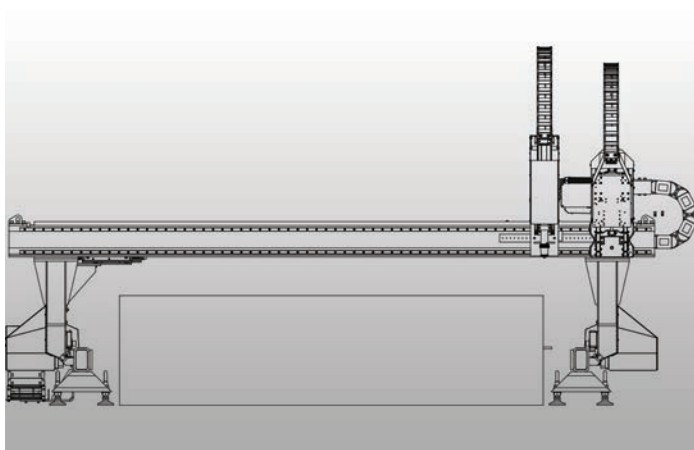
ADVANCED KERF CROSSING

The EZ Control automatically samples the torch height voltage at 500 times per second. The data is fed into a series of algorithms which are designed to adjust the smoothness and sensitivity of the torch height control. This is done by averaging the data over varying periods of time. When the voltage drastically changes the controller locks out the torch height control.

Drastic changes in voltage are usually caused by cutting back over the kerf. Normally this occurs at the end of a cut when the lead out crosses over the lead in. Systems that do not properly adjust to kerf crossing can dip the torch at the end of the cut or even crash the torch into the material.

This can result in either a destroyed part or part that is not properly cut out. Coreo Advanced Kerf Crossing detects these changes in voltage and instantaneously locks out the torch height control. Once the voltage stabilizes, torch height control will resume.

SPECIFICATIONS



Specifications	Inches	Metric
Z-Axis Clearance	38.5"*	978mm*
Z-Axis Travel	12"	305mm
Z-Axis Work Range	38" - 26"	965mm - 660mm
Repeatability	+/-0.001"	+/-0.0254mm
Rapid Traverse	1500 IPM	38.1 MPM
Drive System (X,Y)	Rack & Pinion Helical	Rack & Pinion Helical
Drive System (Z)	Ball Screw	Ball Screw

*without cutting table

Widths starting at 8' wide and modular lengths.

Model	Working Area (ft./mm)
3-305	6x12 / 1829x3658
3-308	6x20.5 / 1829x6248
3-309	8x27 / 2438x8230
3-405	8x12 / 2438x3658
3-408	8x27 / 2348x8230
3-409	10x12 / 3048x3658
3-505	10x20.5 / 3048x6248
3-508	10x27 / 3048x8230



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