

CUTTING, POSITIONING & WELDING EQUIPMENT

MASTERGRAPH EX2

CNC PLASMA/OXY-FUEL CUTTING MACHINE



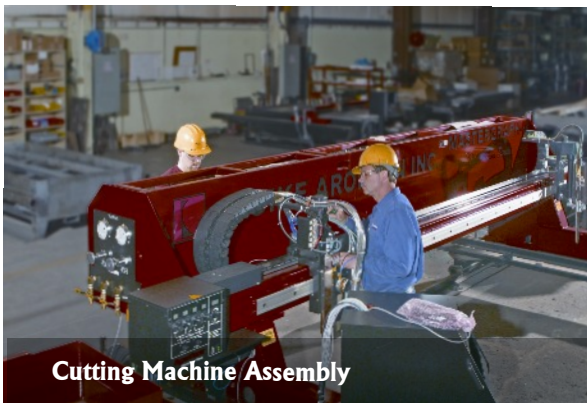
Koike Aronson, Inc./Ransome

Headquarters- Arcade, NY

COMPANY

Koike Aronson, Inc./Ransome is headquartered in Arcade, NY. We are a proud supplier of advanced cutting machines, welding positioning equipment,

portable cutting/welding machines, and gas apparatus. Our knowledgeable staff can assist you with virtually all your needs in metal fabrication. Koike Aronson/Ransome cutting machines can be customized to fit most requirements, and our welding and positioning equipment can be made to accept work pieces of nearly any size.



Cutting Machine Assembly

Our manufacturing area consists of a machine shop, saw shop, two assembly shops, a burn shop, and a weld shop. Handling nearly all manufacturing in-house helps us maintain our extremely high quality. Our factory uses 5S, a lean tool directive, that increases productivity through tidiness and improved organizational practices. We have the capacity to run three shifts with approximately 100 employees per shift. Machining capabilities range anywhere from a small nut to a large weldment. Most importantly, we use our own products to build our customers' machines.

The Engineering Department is comprised of mechanical, electrical, and software engineers with over 250 combined years of design, process, and technical experience. Their knowledge allows us to apply proven designs to customer needs and to develop new technology for custom applications. AutoCAD, SolidWorks, and Cosmos software are used to optimize designs for standard products and to create custom solutions for specialized equipment. Our electrical and mechanical systems are designed to industrial standards for strength, reliability, and safety.



World Class Service Support

We have the technicians, training, and engineering support to keep your machine running like new for years to come.

The Business Unit and Customer Service Representatives of Koike Aronson/Ransome offer our customers well over 170 years of combined experience. They work with our many distributors and manufacturer sales representatives to make sure you get quality products and the right equipment for your application. We encourage feedback, and are ready to work with you to keep your machine productive for many years.

The dedicated service technicians of our Field Service Department work as a team to keep machines running at top performance. This starts with sending pre-installation documentation to prepare our customers for machine delivery, installation, and training. Our website is filled with helpful information including the KAR Club, which offers numerous tips on troubleshooting, tuning your machine, and machine maintenance.



For Other Downloads, please scan here with your smartphone

Made in USA. At Work Worldwide

Koike Customer Visit Program See How Koike Can Make Metal More Profitable For You

Koike Aronson's Customer Visit Program was introduced to provide those looking to purchase equipment the opportunity to come visit us, meet our people, and tour our complete manufacturing facility.

Your visit to our facility is on us. All expenses paid for including: airfare, transportation, room and meals.

Call a Koike Representative for details and schedule your appointment today!

Phone: (585) 492-2400

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MANUFACTURING PROCESSES



LOGISTICS



SAWING / MACHINING



BURNING



ASSEMBLING



PAINTING



WELDING/FABRICATING

MASTERGRAPH EX2

Speed

Performance

Reliability

Flexibility



Shown: Self Cleaning
downdraft table is
optional

Koike Aronson, Inc./Ransome has created a high quality industrial grade, gantry-style, thermal cutting machine using the latest technologies to assure this machine can operate in the most challenging environments. The Mastergraph EX2 series provides unmatched speed, performance, reliability, and flexibility in a thermal cutting machine.

The Mastergraph EX2 can be fully customized to fit your production needs and increase your productivity. Multiple plasma stations, oxy-fuel stations, marking options as well as full contour plasma beveling, which is controlled through a very easy to use operator interface. The Mastergraph EX2 provides the ultimate solution for Steel Service Centers, Heavy Fabricators, Equipment Manufacturers and Shipbuilders are just a few of our markets.



”We Make

Metal More

Profitable”



STANDARD EQUIPMENT



Edge Connect TC CNC Controller

- Windows® 10 Embedded
- Intel J1900 Quad -core MCU or equivalent
- 120GB SSD Hard Drive or better
- 4 GB DDR3 or better
- 19 inch Glass Touchscreen with 1366x768 Native resolution
- IntelliTouch Pro PCAP (Projected Capacitive touch technology)
- 2 USB 2.0 Ports
- Built in Wireless Communication
- Two Plasma Station Operator Console
- Forward and backup on path function
- Skip to pierce or Skip part function
- Part Program Support
- Remote Help
- Supports Networking
- Auto Gas Support
- DXF Input
- Simple Shape Nesting
- Select-able Process Parameter table
- Cut Pro Wizard
- Pronest CNC version included (single part nesting)
- Optional multiple part nesting available upon request
- Sure Cut technologies applied (True hole, Rapid Part and True Bevel when applicable)



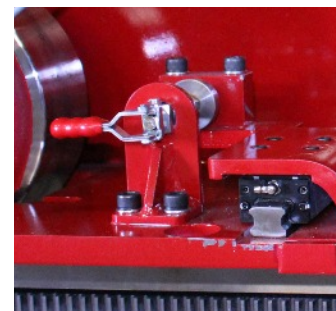
Koike - Engineered Main Electrical Enclosure

No proprietary components are designed into the Koike main electrical enclosure. Only "Off-the-Shelf" components are structured for this design. Fast communication between the CNC and electrical components. 18 Amp Bosch/Rexroth drives are used to give the HP required to achieve 1400 IPM rapid traverse speed. Power requirement is 480/3/60 @ 30 Amp.



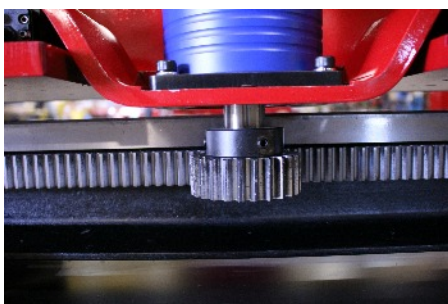
Powerful AC Servo Drives and Ultra Low Backlash Planetary Gearboxes

Powerful 6 HP drives, for X and Y-Axis is engineered for precise, smooth and accurate motion for excellent cut quality.



Drive System Engagement

Precisely engages the pinion into the rack using dual precision linear bearings. Makes for a long life and accurate machine motion.



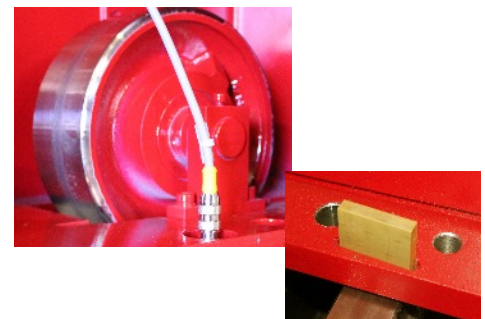
Large Diameter Drive Pinions

Large diameter pinions offer accurate and smooth machine motion and are designed to achieve 1400 IPM rapid traverse speeds.



Large Heavy Duty Rail System

The floor mounted rail systems provides a very rigid foundation for the large 37 KG triple machined rail. This is necessary for very accurate and smooth machine motion. This large heavy duty rail system can be easily expanded to accommodate additional cutting lengths or additional machines on a common rail.



Large 8" Dia Main Roller

Large heavy-duty main saddle rollers provide stability for heavy loads while achieving smooth motion.

Large Brass Rail Scrapers

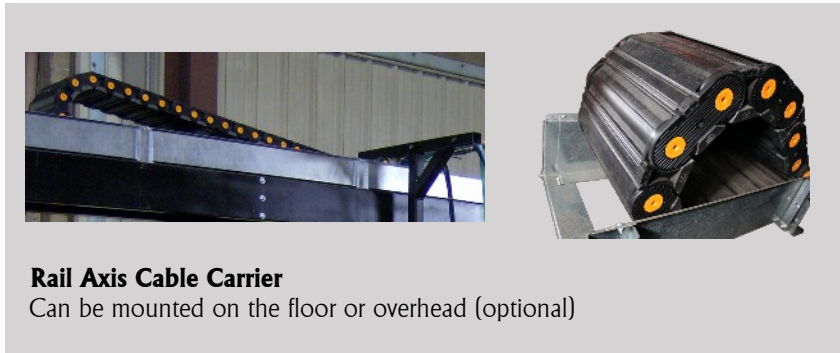
Provide excellent scraping of debris to keep machine motion smooth and stable.

STANDARD EQUIPMENT



Heavy Duty Cross Axis Linear Bearings

Precision linear bearings provide smooth and very accurate motion while providing very heavy load capacities.



Rail Axis Cable Carrier

Can be mounted on the floor or overhead (optional)



Cross Axis Cable Carrier

A sealed design keeps hoses and cables protected from harsh environments.



Machine Tool Testing

All machines tested to ISO 230-2 standards.
Machine Motion Accuracy:
.015" Accuracy
.005" Repeatability
(compensated machine motion in 72";
*measured with laser interferometer).



Cable and Hose Management

All cable and hoses are properly installed to eliminate twisting and fraying during machine motion.



Slave Carriage Band Clamp

Allows easy and accurate manual placement and spacing of tools such as oxy-fuel and plasma torches.

MARKING OPTIONS



Plasma Plate Marking

Low amperage plasma marking with the ability to adjust marking depth through the CNC parameters.

Pneumatic Dot-Peen Pin Stamp Marker Station

Carbide tipped variable speed punch for marking bend lines, layout lines, drill locations and lettering/numbering as small as 1/4" high.

PLASMA SYSTEMS & OPTIONS



Hypertherm HyPerformance/HyDefinition Plasma Systems

HyperPerformance Plasma cuts fine-feature parts with superior quality and consistency while eliminating cost of secondary operations. The quick disconnect torch makes changing consumables fast and easy. Long consumable life, dross free edges, minimum angularity and high system reliability maximize productive "arc-on-time". HyperPerformance Plasma combines fast cutting speeds, rapid process cycling, quick changeovers and high reliability to maximize productivity. 130 amp to 800 amp systems are available to meet your production demands.

Hypertherm Conventional LongLife Air and Oxygen Plasma Systems

Heavy-Duty production tools with cost reducing LongLife technology for dramatically longer consumable life and much lower operating costs. The quick disconnect torch makes changing consumables fast and easy. Impressive cut speeds, consistent cut quality and exceptional consumable life gives this plasma system a reliable performance across a wide range of industrial applications.

Laser Pointer

Allows operator a visual indicator for plate alignment and torch positioning.



3D-LT Bevel Unit with Koike HD Sensor-THC Height Control

True focal point technology. This head is designed so motors and gearboxes are receiving maximum protection from the cutting environment. No electrical wires or components near the heat, smoke and dust involved with the cutting process. Designed for simplified alignment and lower maintenance costs.

Continuous 360° rotation.
Accuracy +/- .5 Degrees
Bevel Angle Capability:
Positive bevel angle: 50°
Negative bevel angle: 50°

Bevel Types include:
A, V, X, Top Y, Bottom Y & K Bevels

With True Hole



Without True Hole



TrueHole™ Ready

TrueHole™ Technology founded by Hypertherm® produces a significantly better hole quality than what has been previously possible before using plasma. This technology was developed for mild steel from gauge to 1" (25 mm) and has been optimized from a 1:1 to a 2:1 diameter to thickness ratio.

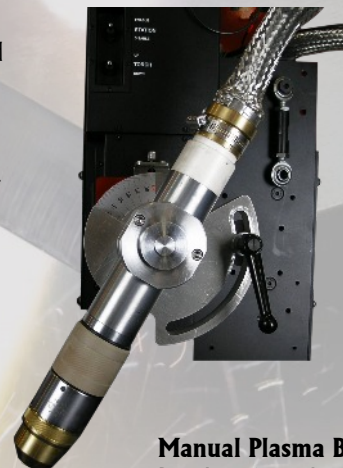


Koike Integrated Sensor THC Torch Height Control

- 12" (340.8 mm) Lifter Travel
- 1,000 IPM Programmable Lifter Speed
- Adjustable stroke retract between cuts
- Dynamic positioning.

Collision Detection Mount

- Magnetic integral breakaway for collision detection and system shutdown
- Primary Ohmic contact plate sensing for clean plate
- Secondary plate sensing means for scaled/rusty plate
- Primary and secondary means for lifter homing



Manual Plasma Bevel Station

Bevel in the rail axis only. Non-contour mechanical adjustment from +/- 0 - 45°.

OXY-FUEL SYSTEMS & OPTIONS



Oxy-Fuel Torch Stations (Up to 8 stations available)

Model "G" motorized lifter, 6-inch (150 mm) or 12" (300 mm) stroke at 40 IPM. All stations are controlled from the Operator Console.

Capacitive height control (not shown) allows exact tip to work piece standoff distance (optional). Automatic ignition (not shown) allows tip ignition automatically through a program or can be executed manually from the Operator Console.



Koike Twin Tip Holder

Converts a single oxy-fuel cutting torch into dual cutting torches. Allows strip cutting and a closer distance between small parts.



Koike Torch Bevel Head Attachment

The bevel head attachment is used in place of a Koike cutting tip. It is used for bevel cutting operations, including top and bottom bevel cuts.



Koike D7 Cutting Tips

- Safer Operation
Koike's 100 Series tips are designed to reduce backfires to keep the operator and torch safe
- High Quality
Each tip is thoroughly tested to ensure consistent high-quality cutting in every tip
- Faster Cutting
Our high-speed divergent tip increases cutting speed by 20-28% over standard tips
- Gas Savings
Gas consumption is reduced up to 26%.
- Durable
A stainless steel cutting oxygen liner results in the tip lasting up to five times longer over standard tips
- Lifetime torch warranty



HI-LO Gas Control with Auto Ease-On

Allows high-lo preheat for fast preheating of plate and superior cutting quality. Features auto ease-on pierce control for cut oxygen. Allows for precise piercing on thicker plate.

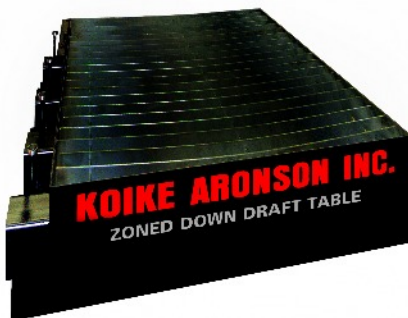
TABLE OPTIONS



Water Cutting Table

The Koike water cutting table is an economic solution to reducing smoke, sparks and dust into the environment.

- Constructed out of 1/4" thick steel the table offers a heavy duty design with reinforced side walls for extra durability.
- Has a steel tank air bladder allows raising and lowering the water level with air.
- Table allows 6" thick plate and under to be leveled to the table for more accurate cutting.
- 1/8" thick slats are spaced 3" apart and curved to help stop small parts from falling into table and prevent straight line cutting along a slat. This feature reduces slag along the bottom of parts and prolongs the life of the slats.
- Easy lift lugs allows you to lift the whole slat and pan assembly or each individual component of this assembly. As an example: it allows for the lifting of slats and the holder for easy access to collector pans.



Koike Zoned Downdraft Cutting Table

- Modular designed
Provides ability to add space as you need it
- Simple Operation
Slat frames and slag pans easily remove for cleaning
- Multiple Zones
Provide optimal fume extraction



Klean Sweep Self Cleaning Downdraft Table

- Production
No need to stop production to remove your slag.
- Simple Operation
Either remove slag by pressing a button or can be programmed to run in set intervals.
- Collection Options
Either choose to have your slag dumped into a container embedded into the floor or conveyed into a portable slag container.



Fume Extraction Unit

- Ledge-less construction
Eliminates dust build-up and accommodates wash down environments.
- Compact design
Minimizes floor space.
- Powerful performance
Proprietary ExtraLife™ Filter Cleaning System provides 30% more cleaning energy.
- Cost savings
Fewer filter change outs, reduced filter disposal costs, less energy usage.
- Reliability
Exceptional results for over 20 years and counting.



Safety Light Curtain

Safeguards personnel from the potential dangers of moving machinery. Will shut-off machine if anything comes within the path of the light curtain while in motion.

Also available Pull Rope E-Stop design



Optional Operator Platform

WORKSHEET

Effective Cutting Width:

Effective Cutting Length:

Material Types:

Material Thickness Range

Plasma Thickness:

Oxy-Fuel Thickness:

CNC Controller

Hypertherm® EDGE Connect

Rail Axis Cable Carrier

Floor Mounted

Overhead Mounted

Plasma Type

Quantity: Hi-Definition

Voltage: Conventional

Plasma System

Hypertherm®

Oxy-Fuel

Quantity: Fuel-Gas Type:

Plasma Bevel

Manual Type

3D-LT Automatic Full Contour

Auto Ignition

Capacitive Height Control

Manual Bevel Attachment

Plasma Height Control

Koike Sensor-THC

Cutting Tables

Pneumatic Water

Dry

Downdraft

Self Cleaning Downdraft

Fume Collector

Plate Marking

Pneumatic Dot Peen

Offline Software

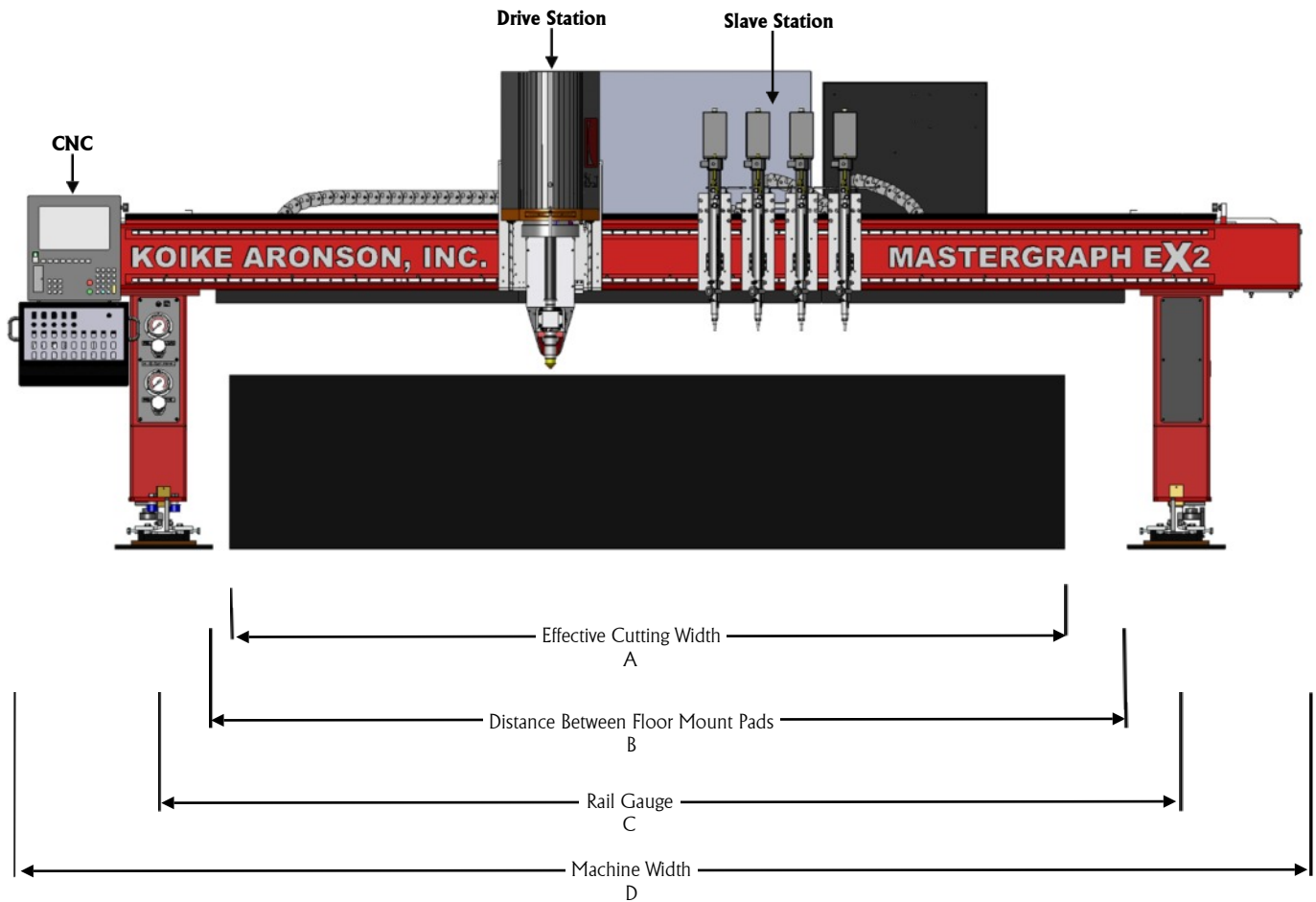
Hypertherm® CAM Solutions

SigmaNEST



Scan with smartphone
to use electronically
and/or email

SPECIFICATIONS



MODELS	MG-EX2 1500	MG-EX2 2500	MG-EX2 3100	MG-EX2 3700
Effective Cutting Width (5-Slave Stations) [A]	60 in	96 in	120 in	144 in
Effective Cutting Width (2-Slave Stations)	84 in	120 in	144 in	168 in
Distance Between Floor Mount Pads [B]	108 ¾ in	144 ¾ in	168 ¾ in	192 ¾ in
Machine Rail Gauge [C]	126 ¾ in	162 ¾ in	186 ¾ in	210 ¾ in
Machine Width [D]	177 in	213 in	237 in	261 in
Effective Cutting Length (Expandable)	250 ft	250 ft	250 ft	250 ft
Rapid Traverse Speed	1400 IPM	1400 IPM	1400 IPM	1400 IPM
Contour Speed (Maximum)	600 IPM	600 IPM	600 IPM	600 IPM
Machine CNC	Hypertherm® EDGE Connect	Hypertherm® EDGE Connect	Hypertherm® EDGE Connect	Hypertherm® EDGE Connect
Machine Drive System	AC Servo	AC Servo	AC Servo	AC Servo
Maximum Number of Tools	9	9	9	9
Maximum Number of Slave Stations	7	7	7	7
Maximum Plasma or Marker Stations	2	2	2	2
Maximum Oxy-Fuel Stations	8	8	8	8
Oxy-Fuel Gas System 10 in Max. Thickness	Hi-Lo	Hi-Lo	Hi-Lo	Hi-Lo
Machine Voltage	480 VAC 3-phase/30 AMP	480 VAC 3-phase/30 AMP	480 VAC 3-phase/30 AMP	480 VAC 3-phase/30 AMP

Specifications are subject to change

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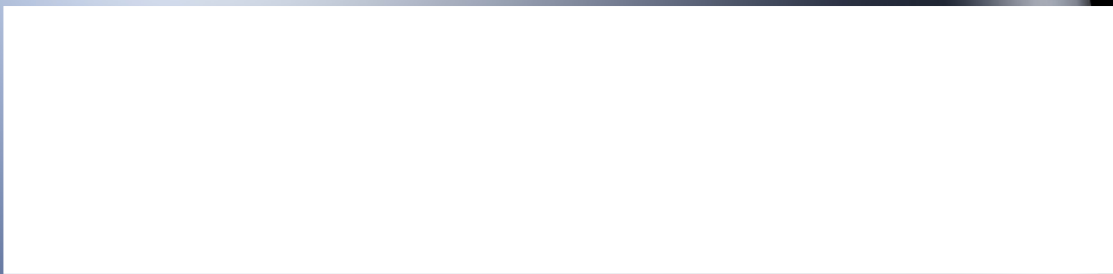
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