



CUTTING

# MasterGraph EX2™

CNC PLASMA & OXY-FUEL CUTTING MACHINE



SIMPLY BETTER BUILT.



# MasterGraph EX2™



Shown: Self Cleaning  
downdraft table is  
optional

**Speed**  
**Performance**  
**Reliability**  
**Flexibility**

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.

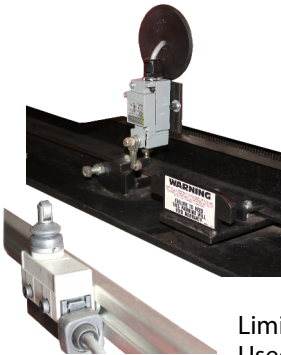
The Mastergraph EX2 can be fully customized to fit your production needs and increase your productivity. Multiple plasma stations, oxy-fuel stations, marking options as well as full contour plasma beveling, which is controlled through a very easy to use operator interface. The Mastergraph EX2 provides 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"**



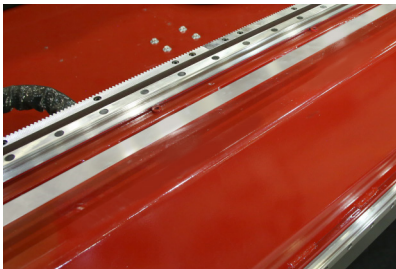
# STANDARD EQUIPMENT



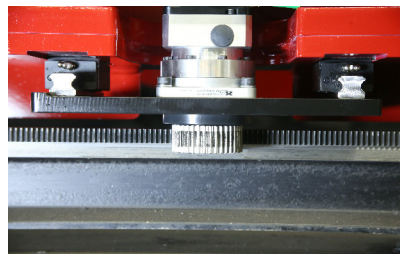
**Limit Switches**  
Used for over-travel as well as homing of the machine.



**Koike Engineered Main Electrical Enclosure**  
Offers "off-the-shelf" components including Yaskawa drives and motors.

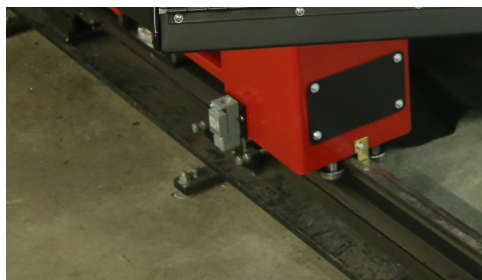
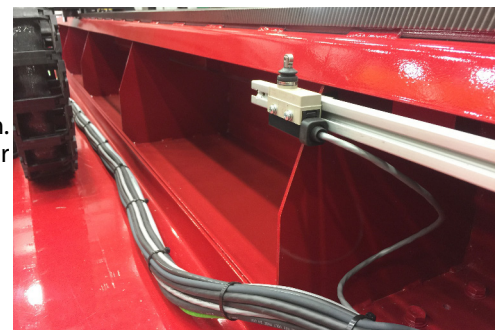


**Linear Way and Helical Rack**  
25mm linear rails and AGMA 12 helical rack and pinion provides smooth and accurate motion.

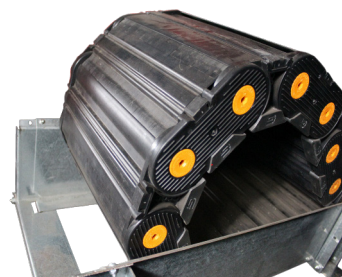


**Large Diameter Drive Pinions**  
Large diameter pinions offer accurate and smooth machine motion.

**Main Beam Construction**  
Solid steel fabricated construction. Includes precision machining for linear bearings and rack.



**Floor Mounted Rails**  
Mounted on a fixed base plate  
Provides highly accurate symmetry for the basis of precision cutting and smooth motion. Allows expansion of rail length and use on a common rail for two or more machines.



**Rail Axis Cable Carrier**  
Can be mounted on the floor or overhead.

# OPTIONAL CNC CONTROLS



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)

## PLASMA SYSTEMS & OPTIONS



### Hypertherm® XPR170 & 300

Redefining what plasma can do.

#### High Definition and Conventional Plasma Systems

Automatic or Manual gas setting. Koike Aronson offers high quality plasma cutting systems by Hypertherm®.

Each of these systems offer a wide variety of features and benefits. From the most basic systems to the most advanced in the market, KOIKE offers a plasma that is sure to meet your needs.

Choosing the right options for your application is not easy. Many options exist for the PlateProX HD. When you decide to buy a cutting machine from KOIKE, not only are you getting a high quality machine designed to perform and last, but most importantly, you are getting the know-how that comes with almost a century worth of experience.

Your application, your job and your factory come first. You'll find that working with our Cutting Machine Business Unit means attention to detail and finding the right machine that fits your application(s) and your budget too.

#### HyPerformance Plasma HPR® XD



HPR400xd  
Production Pierce 2" Mild Steel

HPR800xd  
Production Pierce 2" Mild Steel

#### powermax® series



#### MAX1701200®

Production Pierce 1" Mild Steel  
Liquid Cooled



powermax65- Production Pierce 1/2" Mild Steel

powermax85- Production Pierce 5/8" Mild Steel

powermax105- Production Pierce 3/4" Mild Steel

powermax125- Production Pierce 1" Mild Steel

# PLASMA SYSTEMS & OPTIONS



## 3D-LT Bevel Head 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:
- X, Y, V, and K Bevels



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



## 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



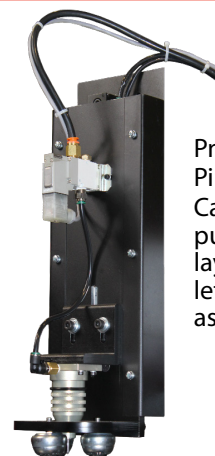
Laser Pointer  
Allows operator a visual indicator for plate alignment and torch positioning.

# MARKING OPTIONS



## Plasma Plate Marking

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

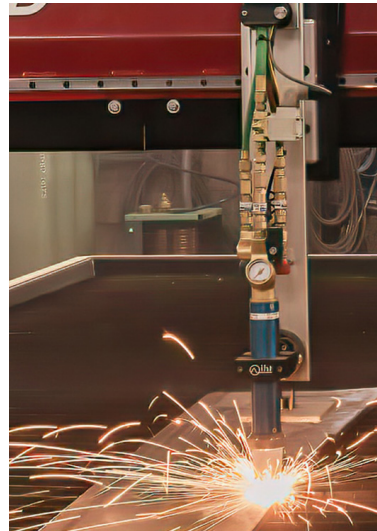


Pneumatic Dot-Peen  
Pin Stamp Marker Station  
Carbide tipped variable speed punch for marking bend lines, layout lines, drill locations and lettering/numbering as small as 1/4" high.

# OXY-FUEL SYSTEMS & OPTIONS



**Hi-Lo Oxy-Fuel Gas System with Auto Ease-On**  
Allows hi-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. Maximum 4 in (100 mm) thick material with 4 torches.



**IHT Torch Station**

Offers:

- Auto ignition
- Auto capacitive height control
- Long tip life
- Quick change tip technology

**Oxy-Fuel Torch Stations** (Up to four stations available)  
Model "G" motorized lifter, 6-inch (150 mm) stroke at 40 IPM. All stations are controlled from Operator console. 500L Koike torch offers 1/8" to 12" (3mm to 300mm) thick plate cutting available. Capacitive height control (not shown) and automatic ignition available (optional).



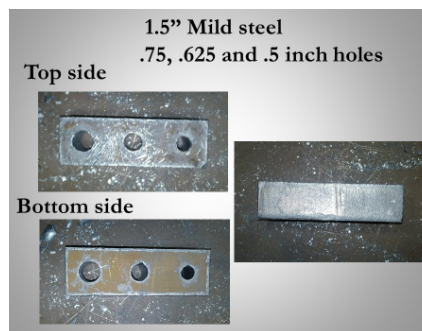
**Auto-Gas Oxy-Fuel Gas System**  
Precise control of gas manifold pressure. CNC controlled oxy-fuel processes.



**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.



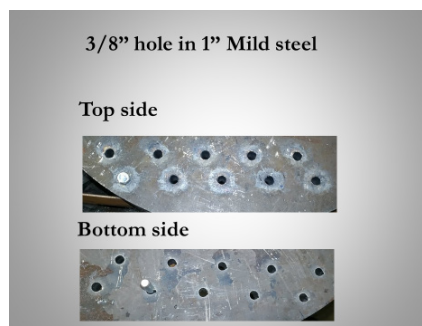
**Koike Twin Tip Holder**  
Converts a single oxy-fuel cutting torch into dual cutting torches. Allows strip cutting and a closer distance between small parts.



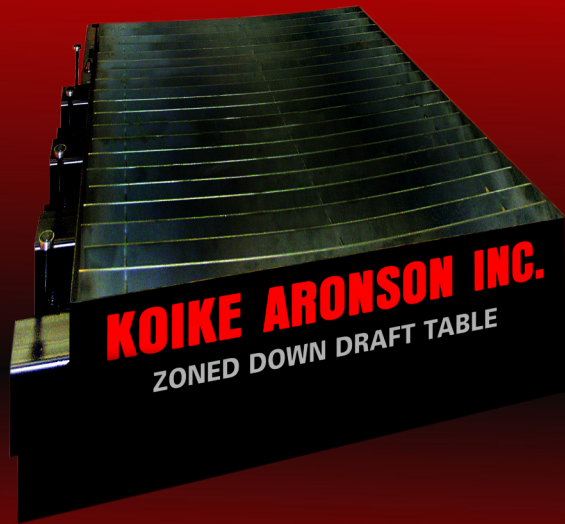
**Koike Oxy-fuel Process Support (KOPS) technology**

*Requires*

- Fit-3 Oxy torch station with ignition and height control
- Koike Auto-gas control system for oxy torch.
- ProNest Software



# TABLE OPTIONS



## Koike Zoned Downdraft Cutting Table

The Koike Downdraft table is as big, or as small, as most workpieces you've got. Its modular design lets you add space as you need it, with a maximum material thickness of 6 in.

Operation is simple: there are no electronic components, and slat frames and slag pans remove easily for cleaning. Fume extraction is everything you need, thanks to multiple zones for optimal fume extraction. Downdraft tables are used primarily for plasma cutting and combined with fume extraction units that filter the air back to the factory. Downdraft tables provide the best option for high-quality cutting with high-density plasma systems.



## Koike Water Cutting Table

The Koike water cutting table is an economic solution to reducing smoke, sparks and dust into the environment. It can be used for both oxy-fuel and plasma cutting. While not the most optimized solution for high density plasma systems, it still provides good results in cut quality. Constructed out of 1/4" thick steel the table offers a heavy duty design with re-enforced side walls for extra durability.

The steel tank air bladder allows raising and lowering the water level with air. The design of the 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.

## Optional Fume Collectors



## Fume Extraction Unit

- For downdraft table

# SPECIFICATIONS

| MODELS                                     | MG-EX2 1500               | MG-EX2 2500               | MG-EX2 3100               | MG-EX2 3700               |
|--------------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Effective Cutting Width (5-Slave Stations) | 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          | 108 ¾ in                  | 144 ¾ in                  | 168 ¾ in                  | 192 ¾ in                  |
| Machine Rail Gauge                         | 126 ¾ in                  | 162 ¾ in                  | 186 ¾ in                  | 210 ¾ in                  |
| Machine Width                              | 177 in                    | 213 in                    | 237 in                    | 261 in                    |
| Effective Cutting Length (Expandable)      | 250 in                    | 250 in                    | 250 in                    | 250 in                    |
| 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®<br>EDGE Pro   | Hypertherm®<br>EDGE Pro   | Hypertherm®<br>EDGE Pro   | Hypertherm®<br>EDGE Pro   |
| 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<br>3-phase/30 AMP | 480 VAC<br>3-phase/30 AMP | 480 VAC<br>3-phase/30 AMP | 480 VAC<br>3-phase/30 AMP |

\*All capacities are for reference only and subject to change without notice.

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