

STRUCTURAL SOLUTIONS

ONE PARTNER, EVERY PROCESS, **INFINITE POSSIBILITIES.**

Lincoln Electric Automation Solutions

**LINCOLN
ELECTRIC**

Automation





THE ESSENTIAL LINC TO HELP CUSTOMERS BUILD BETTER

Lincoln Electric® is a high-performance industrial machinery and technology leader who helps customers manufacture and maintain vital equipment and infrastructure.

Lincoln Electric's innovative solutions enable higher quality and productivity across a variety of processes including welding, cutting, brazing, machining, process automation, and field repair. The Company leverages proprietary technologies and expertise in materials science, power electronics, automation, and intelligent software to help customers build better and achieve resilience in their operations.

Headquartered in Cleveland, Ohio, Lincoln Electric is the essential 'Linc' that keeps the economy running. The Company operates 71 manufacturing and automation facilities across 20 countries and serves customers in over 160 countries. For more information about Lincoln Electric and its products and services, visit the Company's website at <https://www.lincolnelectric.com>.

WHY CHOOSE LINCOLN ELECTRIC STRUCTURAL SOLUTIONS?

THE STRUCTURAL INDUSTRY

Providing solutions for industry-leading global partners

The construction of buildings, bridges, and other structures requires cutting, fitting, welding, expertise, and solutions for stringent code requirements. Lincoln Electric maintains a proven track record with over a century of experience in cutting-edge products, comprehensive welding processes, and automated solutions. Our team of experts will work with you to find the best way to meet your specific requirements and help you achieve a favorable return on your investment.

YOUR SINGLE SOURCE

At every step in our evolution, we've focused on building a portfolio of expertise that encompasses every application within the structural steel fabrication industry: plasma cutting, fitting, assembly, welding, fume control, and material handling.

MEETING EVERY CHALLENGE

What started with welding many decades ago has evolved into a range of applications and solutions that apply to virtually every fabrication process segment. That's why Lincoln Electric invests in application, engineering, automation, and support centers worldwide. Highly trained and experienced technologists, engineers, and applications personnel can troubleshoot customer problems and develop new solutions based on customer challenges we encounter.

In the end, this industry-leading technical support team has one focus: providing you with the best structural steel solutions for your specific needs.

STRUCTURAL BEAM CUTTING

PythonX® STRUCTURAL

PythonX STRUCTURAL is the leading all-in-one robotic plasma system in the world, trusted by more end-users with over 500 systems installed worldwide. The system takes in your drawing files and automatically processes beams, channels, angles, square and rectangular tubes, as well as plate, all on one machine.

In addition, the machine produces bolt holes that are AISC and EN1090 compliant. Additional cutting capabilities include copes, slots, cutouts, cut to length, miter cuts, weld preps, and scribe part/layout marks, all done in one place, eliminating countless hours of material handling in between operations.

Because everything is done on one machine, saving you valuable shop space, you'll be able to streamline your operations. PythonX STRUCTURAL allows you to automate structural steel fabrication operations in your plant, saving you time and money.

More details online:



*"We can put 10x more volume through our shop than before. We have increased our capacity 10 fold since purchasing the PythonX."
- LMC Industrial Contractors, USA*

INSPECTION & PART SORTING

Enspector™ System

The Part Inspection, Quality Control & Sorting System was developed to facilitate the plate management of steel fabricators and automate their structural steel beam factory.

This intelligent scanning system identifies each part, assigns them to the given project, and runs a quality check if the scanned part fulfills your requirements, an essential step to ensure high standards and perfect results. After evaluating the characteristics of a piece, a rapidly moving robot marks and assigns the part to the designated box, which is equipped with an RFID chip to maintain visibility throughout the production process.

In addition to this system, Zeman also offers an Autonomous Guided Vehicle (AGV) to connect your scanning system directly to the Zeman SBA to automate your factory further.

More details online:



Zeman Enspector™ System
Sorting, quality check and
assigning parts for desired
projects.

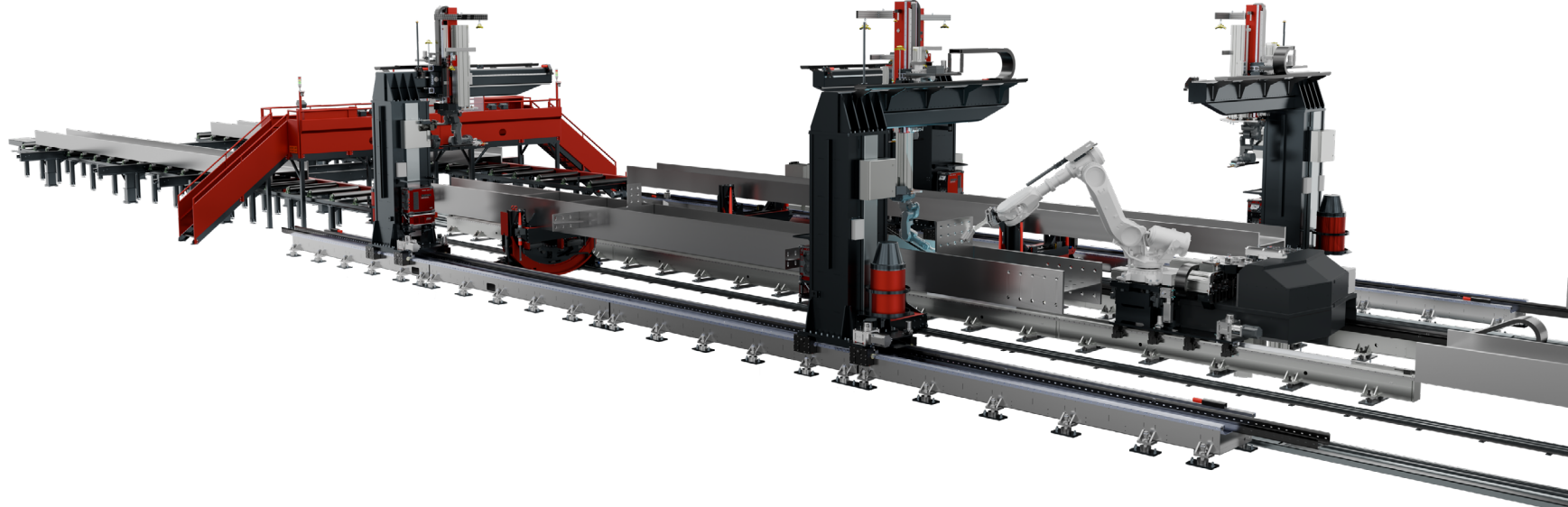
BEAM WELDING & ASSEMBLY

Zeman SBA™ System

The Zeman Steel Beam Assembler (SBA) system represents the flagship of Lincoln Electric's fully automated structural steel beam assembly and welding production line.

The machine can fit and weld large amounts of steel accurately and efficiently. Different models and various machine configurations are available to meet the needs of the individual fabricator. It only takes a few minutes to auto-generate the workflow without programming or teaching the robots, and it doesn't stop there. The big time and cost savings are in the assembly process, where our system can be up to 10 times faster than a traditional manual fitting process.

More details online:



*"With the **Steel Beam Assembler**, we doubled the capacity per annum."*

- Thomas Steel, USA

*"The **SBA** is the solution against the shortage of labor."*

- Prospect Steel, USA



BEAM WELDING & ASSEMBLY

Zeman SR760™ System

Based on Zeman's first Steel Beam Assembler built in 2010, Zeman developed the SR™ 760 system, a single railed version, designed to meet the demands of any fabricator, regardless of size. This single-rail and space-efficient system automates complex welding jobs to help increase weld productivity, safety, and quality.

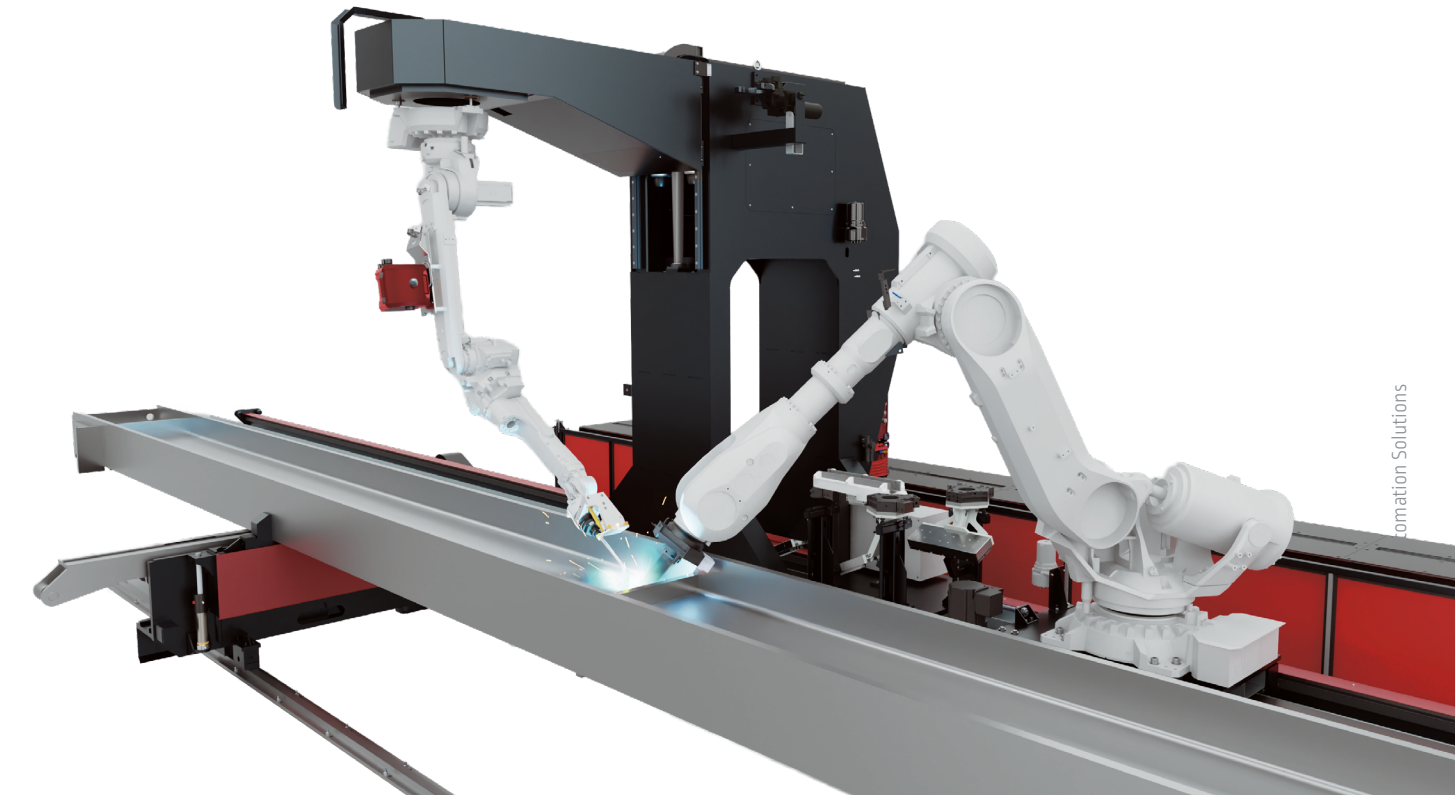
Whether you have to assemble or just weld out beams, this versatile cell utilizes the same work file for seamless integration. It can handle large volumes of steel with precision, and its torch-mounted laser measurement offers pinpoint accuracy by identifying the zero reference point.

More details online:



"By purchasing the Zeman we were capable of replacing man-hours that we had lost by not being able to find qualified fitters and welders in our industry."

- Lexicon Inc., USA



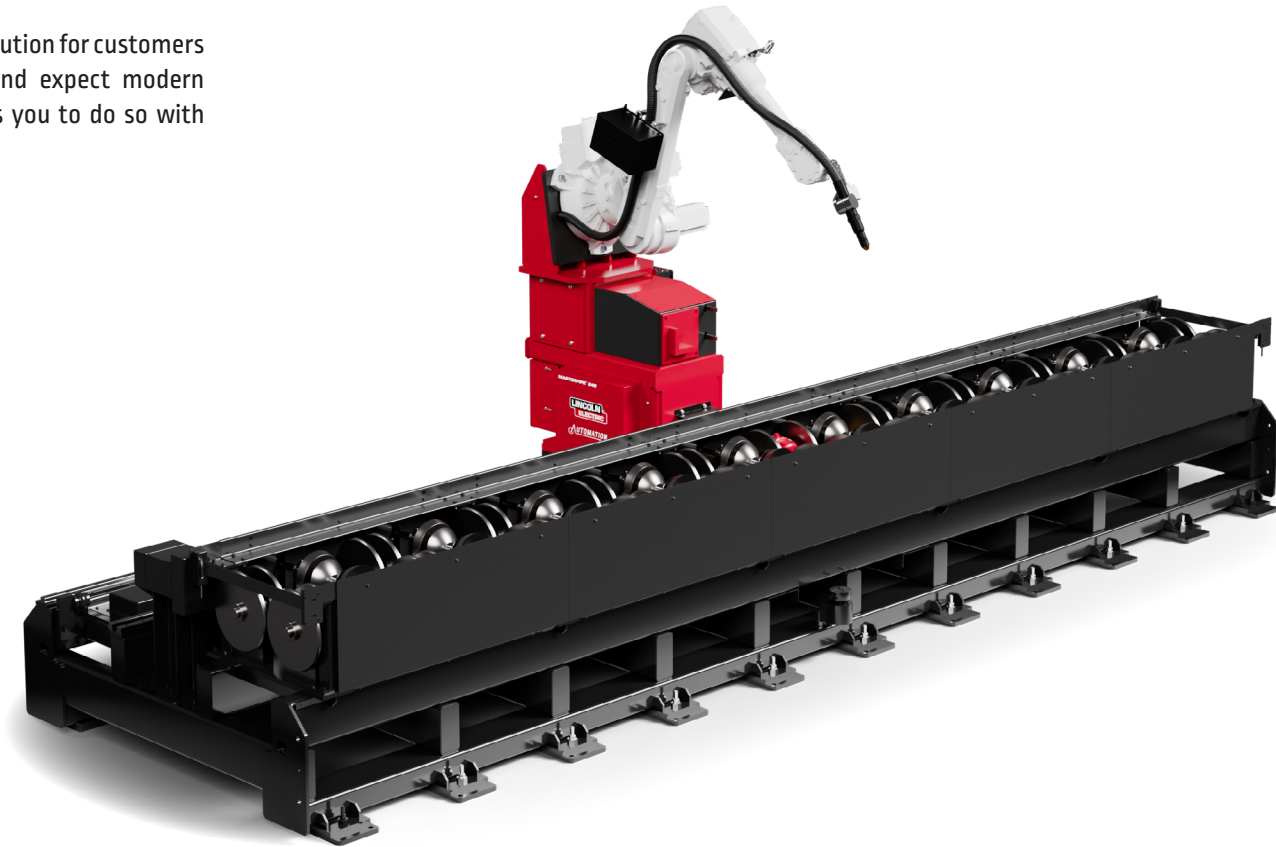
AUTOMATED PIPE CUTTING

MasterPipe[®] 248

When it comes to CNC pipe cutting machines, the industry is dominated with outdated, slow and complicated systems. The MasterPipe[®] robotic pipe CNC cutting system offers a modern solution with a high performance and accurate robotic arm for processing high-definition plasma cuts on pipe, and does so more safely and cost effectively than most systems in the industry.

The MasterPipe 248 is a premium, high-throughput solution for customers who process a high variety and volume of pipe and expect modern automation, serviceability, and support; and enables you to do so with only a single operator.

More details online:



*The **MasterPipe 248** innovates with robotic accuracy and a roller-bed architecture built for changeovers and speed. Process 2"–48" OD pipe with confidence, from straight cut-offs and bevels to complex T-K-Y joints, saddles, miters, and more.*



Small, lightweight, and intuitive to use, the Cooper™ Cobot works alongside humans to open up new opportunities for optimizing welding processes and increasing efficiency.

WELDING COBOT

COOPER™ WELDING CRX-10iAL COBOT

We have combined our welding expertise and automation experience with your real-world needs to create the Cooper Welding Cobot Series. Easily deployed and programmed to weld in minutes, operators can quickly automate tasks for improved productivity and throughput.

Advanced welding capabilities, such as touch sensing, multi-pass and thru-arc seam tracking offer additional solutions for more critical and/or heavy-duty welding applications. Intelligent contact-sensing technology allows Cooper Cobot's to safely work side-by-side with welding operators, without the need for perimeter fencing. Our drag-and-drop programming and smart, tech-at-the-torch technology allows for straightforward robotic programming without complex training. The Cooper Cobot-CRX-10iAL reliability is backed by FANUC – Guaranteed eight years of ZERO maintenance on motors, reducers, sensors, cables, and grease – delivering peace of mind you can trust.

More details online:



HD PLASMA CUTTING

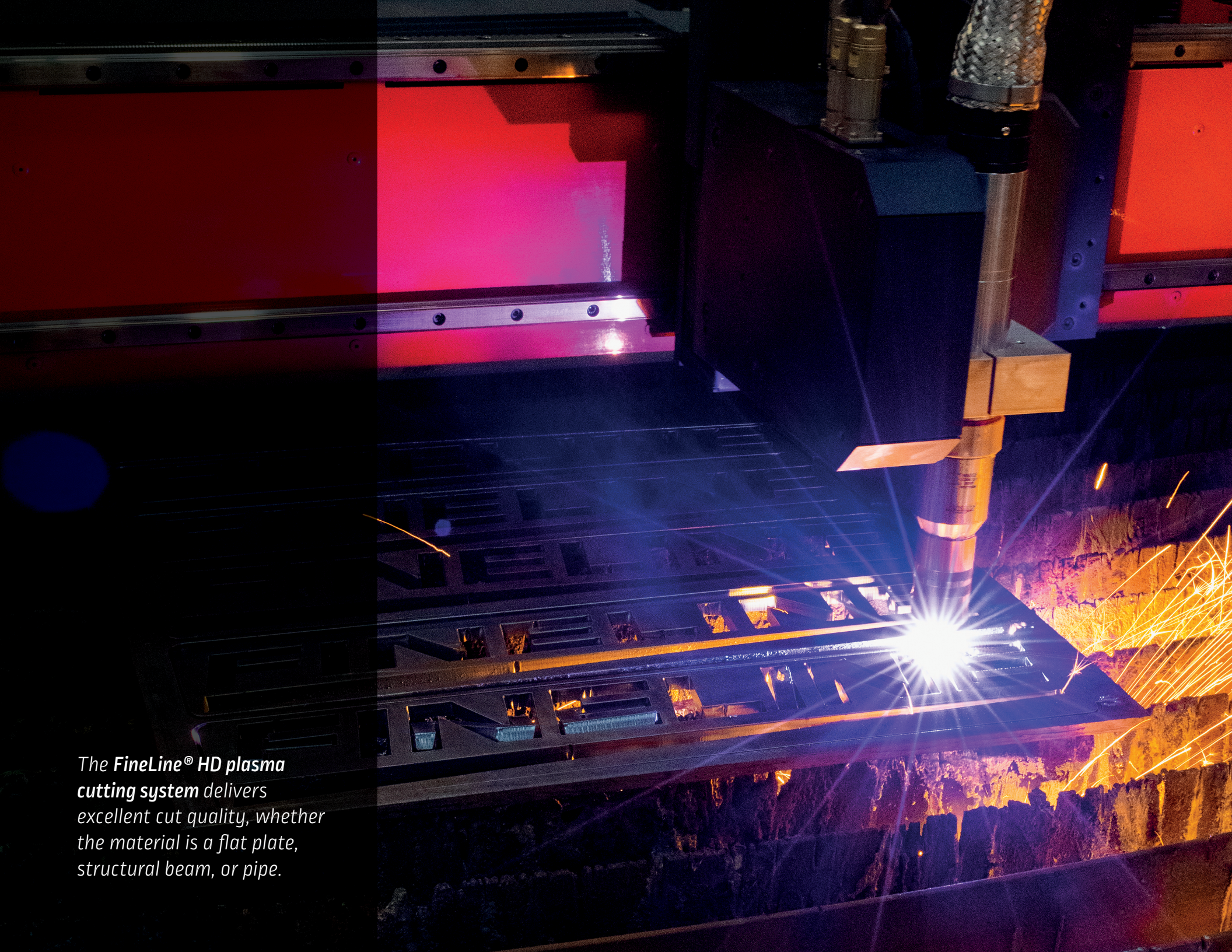
FineLine® HD Plasma Cutting System

Lincoln Electric advances cutting technology with the **FineLine High Definition Plasma Cutting System** by delivering exceptional cut quality on mild steel, stainless steel, and aluminum. The combination of the **Magnum® PRO** plasma torch, and consumables allow for more consistent cuts and a more optimal gas flow, resulting in reduced operating costs.

The system was specifically designed to allow full user control from a single interface and allows the motion controller to rapidly change plasma current and gas pressures for better cut quality and longer consumable life. Full control of the system through a single interface lets you control the output current, have full gas choice and pressure control, and cut speeds based on material selections.

Whether the material at hand is a flat plate, structural beam, or pipe, the FineLine High Definition Plasma Cutting System delivers excellent cut quality.

More details online:



The FineLine® HD plasma cutting system delivers excellent cut quality, whether the material is a flat plate, structural beam, or pipe.



"Cutting pipe is a night and day difference with the **Vernon Tool MPM**. Cutting pipe used to be slow and now we cut nearly 10 times faster with the MPM.

The machine paid for itself within the first year."

- WD Manor, USA

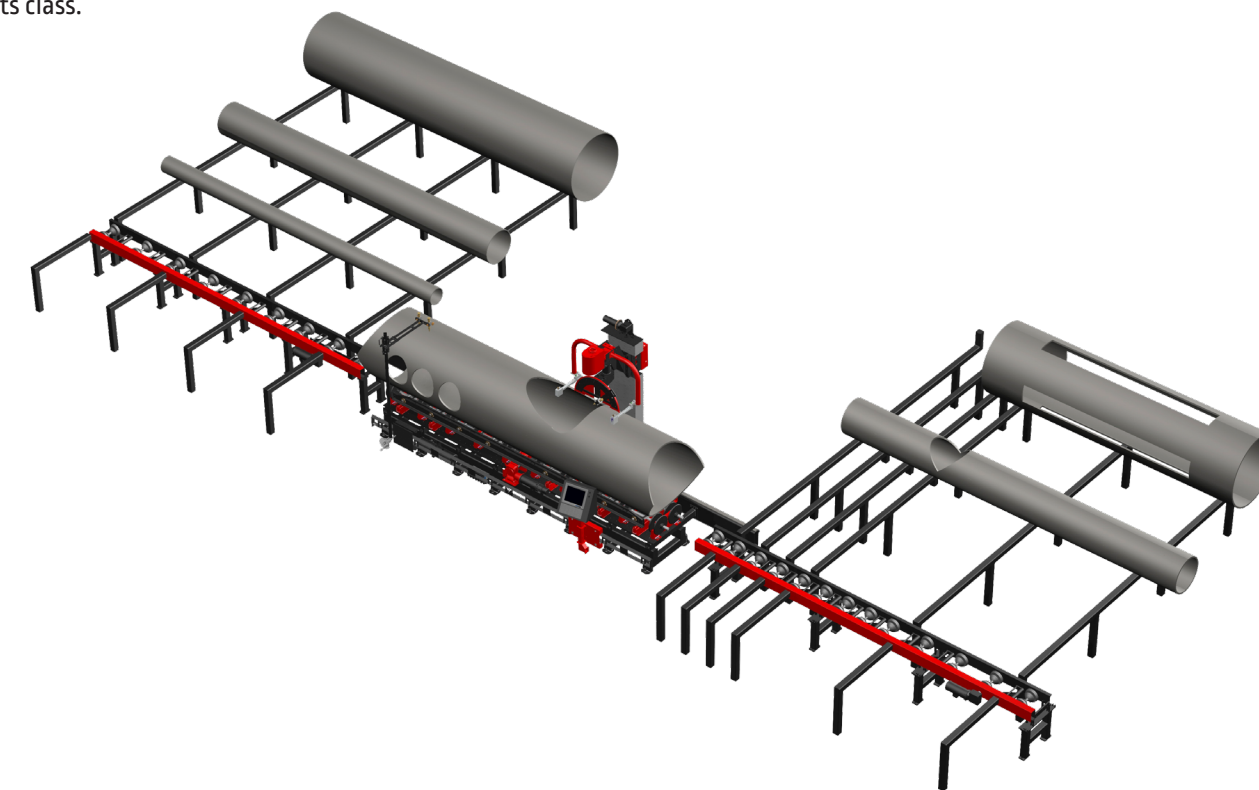
INDUSTRIAL PIPE PROCESSING

Vernon Tool® MPM® System

The Vernon Tool MPM system is a robust and proven pipe profiling solution that has been known to last 50+ years in the field. The MPM system is a heavy-duty, industrial pipe profiling machine.

Capable of handling up to 48" pipe, the MPM system is a highly capable machine. 5-axis profiling is available and programming the cuts is simple and straightforward with the included software. Fit your business's layout with expandable machine beds and conveyor lengths. With many machines still operating well into their third and fourth decade of operation, the MPM system is the leading machine in its class.

More details online:



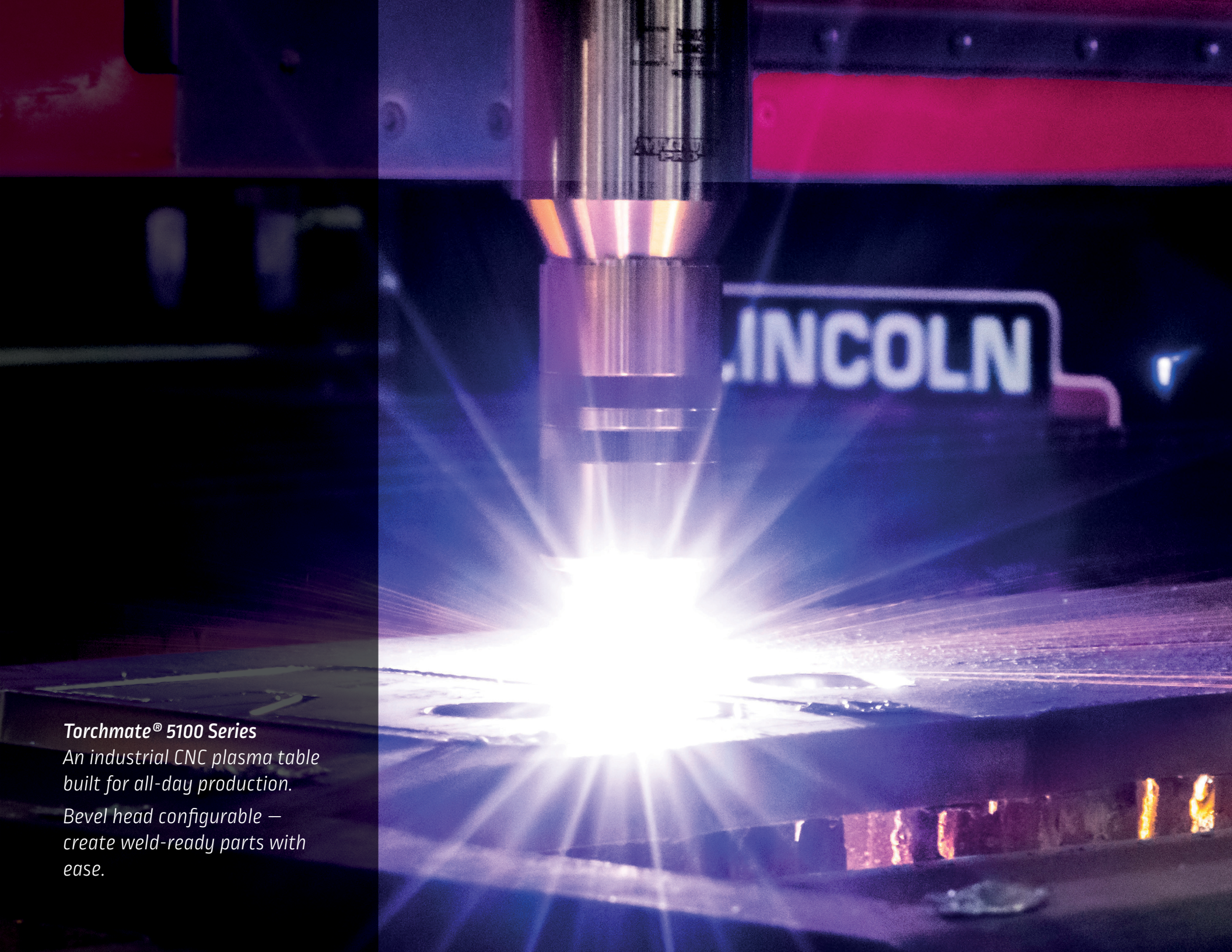
INDUSTRIAL PLATE CUTTING

Torchmate® 5100 Series

The Torchmate 5100 is our flagship industrial CNC plasma table. Designed and built to handle the rigors of continuous production runs with impressive repeatability and reliability.

The machine's design enables it to operate with minimal maintenance and the highest reliability. The Torchmate 5100 is ideal for the high production environment and is fully compatible with our high definition plasma cutters. With two different table configurations and four different plasma power supply options to choose from, there is a Torchmate 5100 table to suit everyone's needs.

More details online:



Torchmate® 5100 Series
An industrial CNC plasma table
built for all-day production.
Bevel head configurable –
create weld-ready parts with
ease.



Each Prism® Circulator® 4000 filters 2000 sq. ft. and generates up to 4000 SCFM of filtered air flow that can reach air throw distances up to 50-90 feet.

FUME CONTROL

Prism® Circulator® 4000

Designed for facilities where additional ductwork is not an option, the Prism Circulator 4000 helps extract welding fumes by continuously circulating and filtering ambient air.

Ideal for large and small shop environments, the Circulator 4000 delivers up to 4000 SCFM of high air flow, allowing for 40,000 cu. ft. of ambient air to be filtered every 10 mins. The Circulator 4000 can be placed in high-dust and fume producing areas or placed strategically throughout the facility based on the airflow patterns.

More details online:





UNITED STATES

Bettendorf, IA
Chattanooga, TN
Cleveland, OH (2)
Coldwater, MI
Columbus, OH
Fort Collins, CO
Fort Loramie, OH

UNITED STATES

Ladson, SC
Macomb, MI
Orrville, OH
Plymouth, MI
Reno, NV
Shelby Township, MI

AUSTRIA

Scheifling

AUSTRALIA

Padstow

BRAZIL

Caxias do Sul
Guarulhos

CANADA

Mississauga, ON
Waterdown, ON
Waterloo, ON

CHINA

Beijing
Shanghai

DENMARK

Odense

FRANCE

Parthenay

GERMANY

Essen
Saarbrücken

INDIA

Pune

MEXICO

Saltillo

SOUTH KOREA

Siheung-si

SPAIN

Valencia



The operation of welding fume control equipment is affected by various factors including proper use and positioning of the equipment, maintenance of the equipment and the specific welding procedure and application involved. Worker exposure level should be checked upon installation and periodically thereafter to be certain it is within applicable OSHA PEL and ACGIH TLV limits

CUSTOMER ASSISTANCE POLICY

The business of Lincoln Electric is manufacturing and selling high quality welding equipment, automated welding systems, consumables, cutting equipment, and [educational products]. Our challenge is to meet the needs of our customers, who are experts in their fields, and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or technical information about their use of our products. Our employees respond to inquiries to the best of their ability based on information and specifications provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment, or to provide engineering advice in relation to a specific situation. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or communications. Moreover, the provision of such information or technical information does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or technical information, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose or any other equivalent or similar warranty is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the definition of specifications, and the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements. Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

LEA-041526DP-01



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