

The RAZOR™

Robotic Tube Cutting and Profiling System

VERNON Tool's™ RAZOR™ is an automated tube cutting and profiling system designed to increase tube fabricators' productivity, quality and overall operations. The RAZOR™ improves productivity and quality by consolidating the typical multi-step fabrication process – set-up, layout, manual/CNC machining and end prep – into one easy operation. The ability to take 3D models (CAD) to computer-aided manufacturing (CAM) is provided, eliminating the time consuming teach and learn programming process. Additionally, the system is outfitted with a large pre-loaded cut library, providing maximum tube and pipe configuration flexibility.

The standard configuration for the RAZOR™ includes a 6-axis FANUC® Robotics ARC Mate® 100iC industrial robot, FANUC® R-30iA controller, servo-driven 2-axis positioning carriage, 4-jaw idler and plasma cutting unit. The RAZOR™ can process tubes with cross

sectional dimensions up to 11.5" (8x8, 10x4) and overall lengths up to 40 ft. Depending on the material being cut, maximum cutting speeds of up to 320 ipm can be achieved with optional high definition plasma cutting equipment.

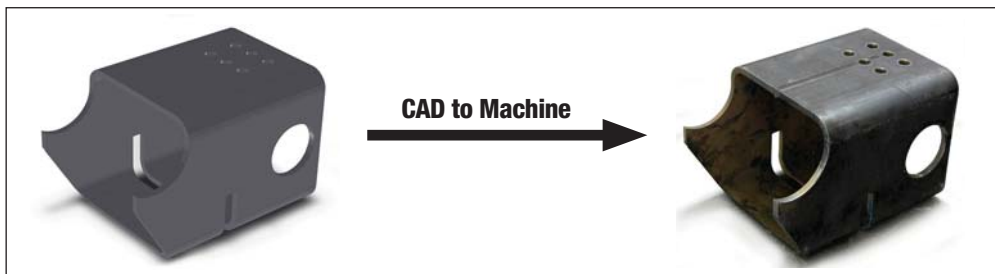
The WinMPM™ Windows®-based operating system developed by VERNON Tool™ powers the RAZOR™. Its easy-to-use, icon-driven touch screen system interface makes operator training and implementation seamless, allowing fabricators to get up and running within hours, not days. WinMPM™ includes a standard cut library which can be used to program standard end and mid section cuts/shapes.

The new VCAD™ software from VERNON Tool™ is also included and provides CAD/CAM capabilities. VCAD™ allows you to simply import your 3D model, configure your cut parameters and output a file for direct upload into the RAZOR™.



FEATURES

- CAD/CAM capabilities eliminates teach and learn programming.
- Consolidates set-up, layout and multiple machine routings into one simple operation.
- Affordable alternative to expensive laser tube cutting equipment.
- Easy to program and operate – no special skills required.
- Optional Hi-Def plasma available: cutting speeds up to 300 ipm (7.62 mpm).



VERNON TOOL



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STANDARD SPECIFICATIONS

Square Tube Capacity	8 in x 8 in (203 mm x 203 mm)
Rectangular Tube Capacity	10 in x 5 in (254 mm x 127 mm) [11.25 in (286 mm) cross-sectional]
Pipe Capacity	12 in (305 mm)
Length Capacity	20 ft (6.1 m) [expandable to 40 ft (12.2 m)]
Max. Weight per Foot	50 lbs (22.7 kg)
Max. Total Weight	1000 lbs (454 kg)
Longitudinal Travel	8 ft (2.4 m) [expandable to 38 ft (11.6 m)]
Max. Cutting Speed	320 ipm (8.13 mpm) [dependant on plasma source / material]
Plasma Torch Motion	FANUC ARC Mate® 100iC Robot, R30iA Controller
Rotation Drive	Precision planetary gear head
Linear Motion	Precision rack and pinion
Input Power	480VAC, 3-phase, 60Hz

SOFTWARE

Operating System	WinMPM (run on Microsoft® Windows®)
Standard Shape Library	Straight, miter, saddle, CL offset, multiple intersection, elbow support, gusset slot, round hole, rectangular hole, saw cut, overlapping pipe holes (with axial/baseline/work point offsets).
Live Internet Diagnostics	VeAssist™ web link direct to VERNON Tool™
CAD/CAM	VCAD™ CAD to path interface

WORLD-CLASS AUTOMATED CUTTING EXPERTISE

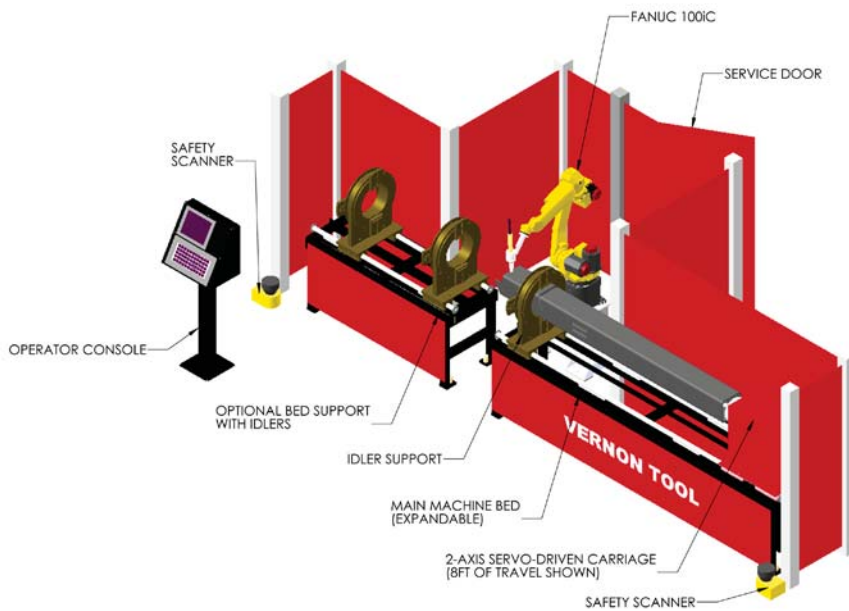
With nearly 1,000 installations worldwide, VERNON Tool Company is the industry's preferred source and global supplier of 3D profiling, customized pipe cutting, and metal fabrication machinery. You'll find our products in the process piping, offshore, structural, pressure vessel, and shipbuilding industries.

EXCEPTIONAL CUSTOMER SERVICE

VERNON Tool's™ Ve-Assist™ allows direct communication between the user and the supplier to troubleshoot and train in real time with VERNON cutting machines in the field over a secure broadband connection:

- Service experts log on the machine to observe, exchange data files, update operating systems, and diagram procedures or problems.
- The dedicated web link also serves as a valuable tool for demonstration and training purposes on desktop PCs.

A virtual service technician is side-by-side the machine operator to maximize machine productivity and operator efficiency. Post-warranty contracts also include this innovative service to ensure customers' ongoing satisfaction and success.



CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information 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. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but 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 and www.vernontool.com for any updated information.

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