

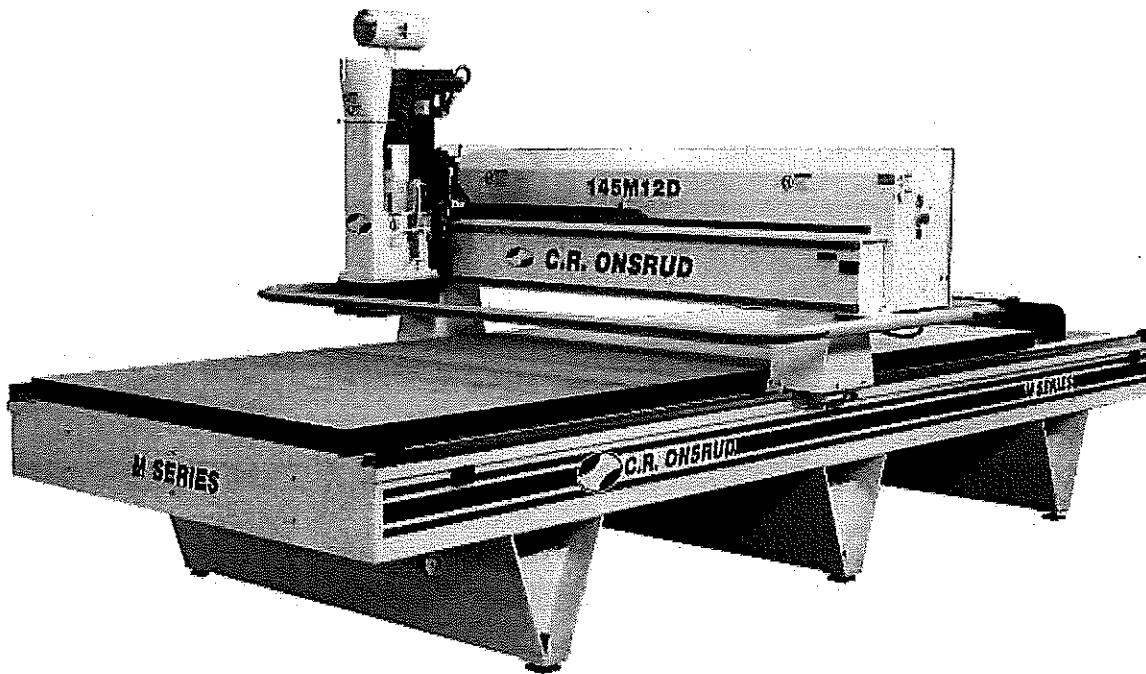


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**30-DAY PROPOSAL FOR 2019 MODEL 97M12 "M Series" CNC ROUTER**



\*Image depicted may not represent this quoted machine's exact specifications.

C.R. ONSRUD "M Series" CNC ROUTER	PRICE	QTY	TOTAL
<p><b>ONE (1) NEW C.R ONSRUD MODEL 97M12 "M Series" CNC ROUTER</b>            Designed, FEA Engineered, and Manufactured in America, utilizing steel construction.</p> <ul style="list-style-type: none"> <li>• Dual supported gantry driven on both sides with independent servo motors and drives. This dual channel design enhances accuracy &amp; rigidity. The moving gantry, fixed table, design allows for up to 2,000 ipm programmable feed rates.</li> <li>• Control system comes standard with full 3D capability (multi-axis interpolation).</li> <li>• Precision linear motion systems on all axes.</li> <li>• Standard with Onsrud Universal High Flow Vacuum Table System suitable for flow-through spoil boards, dedicated fixtures, or easily upgradable for pod systems.</li> <li>• Price includes a limited two-year warranty</li> </ul>	INCLUDED	1	INCLUDED

<b>97 - 4x8 - Work Envelope</b>			
CR ONSRUD High-Flow Universal Vacuum Table System - Includes: oversized 4" intake manifold, high-capacity vacuum plumbing, high-flow 45mm grid waffle patterns, with Onsrud's Unique High Flow Vacuum Inlets, to offer maximum vacuum airflow & absolutely minimal airflow restriction for excellent part holding.	INCLUDED	1	INCLUDED
High Flow Vacuum Zone - Actuated via Manual Ball Valve	INCLUDED	1	INCLUDED
14-inches of Z stroke - 14" Z axis stroke	INCLUDED	1	INCLUDED
4x8 - Flow-Through Spoil Board - LDF table top to be used as replaceable sacrificial spoil board.	INCLUDED	1	INCLUDED
<b>Controller</b>			
FANUC Oi Handheld Machine Controller System - Industrial CNC Machine Controller with Fanuc IPendant HMI w/High Res touch screen. Fanuc Oi is not a PC with a control card but is a dedicated Industrial PLC designed to control CNC motion, for maximum reliability and performance. Network capability, plus adds Large FANUC Digital Drives & Servos. Handheld interface offers convenience of being able to move freely around the machine while controlling functions. Allows for Full remote diagnostic troubleshooting capabilities. Adds M-code controlled vacuum zones (if equipped with Vacuum Table Option). (requires 460V out isolation transformer).	INCLUDED	1	INCLUDED
<b>Head Options</b>			
12 HP Spindle - 4-Pole, 9Kw, 12HP, HSK-63F -- 24,000 RPM fully programmable, variable speed, reversible, HSK 63F tool interface, quick-change cartridge style spindle; capable of routing & drilling, with programmable feed rates with override capability.	INCLUDED	1	INCLUDED
Integrated Dust Transition System - Integrated Dust Extraction hood pulls chips away from the spindle's nose & up a separate chamber & hood to effectively remove chips from the machining process. (6in dust transition also provided for connecting to your dropped-in flex hose) - **consult your machine specific footprint for specific connection recommendations based on your options.	INCLUDED	1	INCLUDED
<b>Isolation Transformer Options</b>			
15kVA Isolation Transformer - strongly recommended for up to 12 HP models as an electrical noise filter. 6-tap, non-compensating transformer can be specified for your voltage in/machine voltage out for either 460V or 230V nominal. Other voltages are additional charge.	INCLUDED	1	INCLUDED
<b>Machine Lubrication Systems Options</b>			
Standard Manual Greased Lubrication - Bearing Blocks and Ballscrews have standard zirk fittings for easy application of grease	INCLUDED	1	INCLUDED
<b>Dust Extraction System &amp; Stanchion Kits Options</b>			
M Series Dust Collection Center Stanchion Kit - (includes flex hose, 1 steel stand, & clamps to connect dust transition to your collector above the center of the spindle plate)	INCLUDED	1	INCLUDED
<b>Electrical Cabinet Cooling Options</b>			
Air Conditioned Electronics Cabinets - Recommended for extreme environments & some non-temperature controlled workplaces. Option replaces the standard heat exchanger system.	INCLUDED	1	INCLUDED
<b>Tooling Measurement System Options</b>			
Premium Tool Maintenance Package - Includes: Torque Wrench to ensure proper collet tightening, Premium tool holder clamp stand - fits all HSK-63 tool holders, HSK spindle wiper, two tool clips, and Rust Free, T-9, & Collet Brush kit to help maintain your tool holders and collets.	INCLUDED	1	INCLUDED
Onsrud Digital Bench-Top Tool Setter - allows you to measure tools off-line in seconds and be ready for the next job while the machine is still in production.	INCLUDED	1	INCLUDED

<p align="center"><b>Startup &amp; Maintenance Tooling Kit</b></p> <p>Comprehensive Owner's Manual. Also includes: Preventative maintenance, startup, and tooling information; 2mm – 8mm Folding Hex Key Set; Roll of 4508 Closed Cell Vacuum Tape; Tube of Ball Screw Lube; M20 X 60mm, &amp; M20 X80mm Leveling Bolts w/Leveling Nuts; Software Training and Applications guide &amp;/or training tutorial (if available); Plus:  (2) HSK High Speed Balanced Standard Tool Holders  (2) Thrust Bearing Chuck Nuts  (2) Standard SYOZ 1/2In Collets  (2) Collet Wrenches: (1) Spanner Wrench &amp; (1) Open End Wrench</p>	INCLUDED	1	INCLUDED
<p align="center"><b>2-Year Warranty</b></p> <p><b>2-Year Warranty - TWO (2) Year limited warranty on all parts &amp; labor FOB the factory. In addition, all applicable Original Equipment Manufacturer's warranties apply. Each year is defined as 50 hours per week for a period of up to 12 months. Wear items may be prorated after evaluation.</b></p>	INCLUDED	1	INCLUDED
<p align="center"><b>Installation - The Customer Will Be Responsible For The Following:</b></p> <p>In preparation for the machine installation, the Customer is responsible for:  1) Any Floor Preparation that May be Necessary, including bolting down of machine, grouting, etc. – (typically at least 4-5 inch thick concrete pad is recommended but customer's structural engineer should determine what is actually needed based on specific machine ordered).  2) All Power Supply Connections (per national &amp; local codes or standards)  3) Providing Dust Collection – (6" port for Tech Series &amp; Mate Series machines; minimum 1200 cfm &amp; recommended 1800 cfm; 8" port for most other 3-axis machines; most machines minimum 1200 cfm &amp; recommended 2000 cfm. - consult your machine specific footprint for specific recommendations based on your options.)  4) Any Necessary Pneumatic Connections &amp; Supply – (100 psi with up to 10cfm consumption for standard machines and up to 40cfm for larger and multi-head machines)  5) Any Rigging, Labor and / or Handling Equipment (forklift, moving or rigging equipment, etc.)  6) Materials &amp; Tooling Needed For Machine Testing, Training, or Adjusting  7) Necessary Post Processors for any Software Provided by Outside Software Vendors  8) Providing an adequately trained programmer and / or IT person with ready to run programs</p> <p>Most of our single base CNC Routers will ship fully assembled, &amp; nearly functional. CR Onsrud expects the machine to be in place, &amp; all of the necessary utilities to have already been brought to the machine, before the technician arrives. If the machine is a multi-base machine, the bases should be placed within a couple of inches (and roughly aligned) so the technician can easily pull the bases together and precision align them. The technician finishes preparing the machine to run, &amp; instructs any machine operators in how to maintain &amp; operate the machine properly. Technician's travel expenses are billed separately to you, at our costs, &amp; are not included.</p>	INCLUDED	1	INCLUDED
<p align="center"><b>CR ONSRUD 24/7 AFTER HOURS EMERGENCY MACHINE SUPPORT</b></p> <p>After Successful Machine Training &amp; Installation, you will receive unlimited toll free access to the CR Onsrud 24/7 After Hours Emergency Machine Support Line. After 5-years, additional years of 24/7 After Hours Emergency Machine Support can be purchased.</p>	INCLUDED	5	INCLUDED
<p align="center"><b>CR ONSRUD MACHINE SUPPORT AFTER INSTALLATION</b></p> <p>After Successful Machine Training &amp; Installation, you will receive unlimited toll free factory technical support, during normal business hours, in addition to any support provided by your authorized CR Onsrud Distributor. After 5-years, additional years of advanced machine support can be purchased. Tech support will only be provided to trained operators &amp; only after successful machine installation. After 5-years, basic tech support will only be provided to factory trained operators.</p>	INCLUDED	5	INCLUDED