

ROUTECH
RECORD 125 N
SUPER CNC ROUTER

CONCEPT

Numeric control machining center. Flexible and versatile, with an open structure and fixed work table. The machining unit is equipped with a strong, powerful routing unit, made to fulfill all machining requirements on various types of materials (solid wood, chipboard, mdf, plastics and light alloys) and to guarantee constant high quality over time. The multi-function worktable guarantees simple, rapid setups and meets all hold-down requirements on workpieces of any shape. The Office PC control unit is the best solution for modern machining centers, since it combines the calculating power and interpolation quality of the numeric control with the user-friendliness typical of the personal computer. Suitable guards protect the machining zone, which is completely safe, since the guards protect the operator against materials that may be ejected or from contact with moving parts.

STRUCTURE

The base and mobile upright are the two elements that form the machine structure. They are designed and built so that they constantly guarantee top quality finishing even during the most demanding stages of machining. They are made of electro-welded stabilized steel using thick plate metal with stiffening ribs at the points subject to the greatest stresses. Machining conditions are simulated during the design stage using a three-dimensional CAD solid modelling system, to highlight any areas of the structure subject to possible deformation. All mechanical machining is performed on machining centers with a single positioning operation to guarantee the strict planar, perpendicular and precision tolerances.

ADVANTAGES AND BENEFITS

***Monobloc construction.**

***Ribbed frame designed for heavy duty machining, speed, and accuracy.**

MACHINING UNIT

It consists of a routing unit fitted with a power electrospindle and automatic tool changer. The unit is fixed directly to the machine's mobile upright, guaranteeing maximum strength during routing, and designed to support the auxiliary machining units (boring, universal and blade). A pneumatic balancing device with pressure stabilizer cancels out the unit vertical load, allowing greater agility and high precision positioning. The automatic tool changer set-up for angle head control is mounted on the mobile upright.

ADVANTAGES AND BENEFITS

- *Spindle is pressurized to keep dust outside of the spindle.**
- *Ceramic ball bearings ensure longer spindle life.**

ELECTROSPINDLE

Power 2000 is the new generation electrospindle designed and made directly by SCM to guarantee maximum quality by means of the strictest controls during construction and testing. It is a high performance device, with full power available at low revs. Acceleration and deceleration times are kept to a minimum, providing optimum performance with increased productivity, even with heavy duty stock removal.

- 4-pole motor for greater specific power and improved dynamic quality
- Rigid, integral monoblock steel structure for maximum precision in the connection between internal components and a large surface for heat dispersal
- A pair of high precision ceramic bearings with oblique contacts and elastic preloading
- System of labyrinths and internal pressurization for sealed bearing protection from sawdust created by machining
- Lifetime lubrication
- Syringe device for discharging the tool holder release force to the spindle shaft, to protect the bearings
- Maintenance of thermal equilibrium by cooling with coaxial air flow
- Thermostatic safety probe set to 90° for operating temperature control
- Safety and tool change cycle consent sensors:
 - spindle shaft rotation stop control
 - tool taper lock/release control
- Reference with preloading system for angle heads
- HSK F 63 tool taper coupling

TOOL TAPER COUPLING

The HSK F 63 coupling allows use of the automatic tool changer, for machining workpieces with various profiles with a single positioning operation, angle heads, for boring and routing with horizontal axis and, in addition, it allows advance tool setting (using the optional Preset 14 tool), to avoid any subsequent adjustments to the workpiece program during set up or when changing the tool.

- Twin Taper + Table reference surface for maximum tool strength during machining and high precision positioning
- Compact dimensions for extremely rapid tool changes
- Jet of compressed air, from inside the electrospindle, during the tool change-over stage, to keep the contact surfaces clean and achieve maximum connecting precision

ADVANTAGES AND BENEFITS

- *HSK Taper provides double reference for maximum rigidity
- *Cylindrical shank tools from 3 to 30mm in diameter

AUTOMATIC TOOL CHANGER

Consists of a circular tool magazine with rotary tool selection movement automatically controlled by the numeric control. This allows you to save the tool parameters once and retrieve them for use directly by means of the workpiece program. You can also use the tool changer to perform machining with special routing, boring and cutting units with a blade with horizontal axis and tilting, since the magazine is set up for angle head management.

ADVANTAGES AND BENEFITS

- *Fifteen years of tool changing experience in the woodworking market.
- *Controlled by stepless motors to allow 12 second chip to chip tool changes.
- *Flexibility of having 12 tools including two angle drive heads.

PARTICLE EXTRACTION

All machining units are fitted with an extractor hood which operates along the entire edge of the unit and, with the aid of flexible rebound straps, guarantees optimum shavings recovery from the machining zone. The routing unit hood has automatic vertical movement, controlled by the numeric control, which allows correct positioning according to the tool length and workpiece thickness. An additional extractor outlet is present inside the machining unit guard since this outlet also transfers and gathers shavings which are not captured by the machining unit hoods.

ADVANTAGES AND BENEFITS

- *Much cleaner working environment for today's environmental safety standards.
- *CNC controlled dust collector hood placement

MULTI-FUNCTION WORKTABLE

The multi-function worktable is made completely of drawn aluminium to resist the most demanding machining conditions and maintain its planarity over time, even if there are significant variations in humidity and temperature. The table is directly fixed to the machine base, for strength and to prevent vibrations and has integrated internal pipes for the vacuum made directly by the drawing. Along the entire surface there are holes set 120 mm apart for the vacuum and grooves set 40 mm apart for fixing the workpiece using simple rubber seals when machining only applies to the surface of the workpiece. Optional SCM accessories (Modulset and MPS suction cups) allow you to create any geometry in a simple, rapid fashion. The table also has inverted "T"-shaped cavities and threaded steel bushings (on each vacuum hole) to secure tooling or the special hold-down systems needed for machining complex workpieces. You can also control pneumatic devices using suitable compressed air outlets on the front on the table. The entire outer edge can be fitted with retractable stops controlled by the numeric control, for fixed references during workpiece positioning and for the program origin.

ADVANTAGES AND BENEFITS

- *Universal table provides the quickest changeover time for a wide variety of applications.**
- *Vacuum is rapidly isolated on any area on the table providing an excellent system for profitable manufacturing of small custom batch sizes.**
- *Elevation of components which allows for single pass profile cuts, sanding operations, or horizontal drilling via moduleset of vacuum cups.**
- *Nested Based manufacturing by using flow-through spoilboards is available.**

VACUUM SYSTEM

All vacuum system components (valves, pipes, etc.) are of a size designed to achieve maximum capacity and the highest possible vacuum value generated by the pump. The digital vacuumeter, located directly on the worktable, constantly controls the actual vacuum value reached.

The vacuum system consists of:

- High head vacuum pump
- Circuit opening/closing solenoid valves
- In line filters for pump protection
- Digital vacuumeter which can be programmed according to the porosity of the material to be machined

AXIS MOVEMENT

The movement of the axes is obtained using digital brushless motors on high precision recirculating ball screws with a preloading system which zeroes the connection play and guarantees maximum positioning precision. The axes slide on linear guides having a prismatic cross-section, with preloaded recirculating bearing shoes that provide superior performance in terms of movement quality and resistance over time. The computerized control of acceleration, together with significant structural strength, allow extremely rapid, fluid movements without any vibrations at all.

LUBRICATION SYSTEM

Consists of a centralized system for lubricant distribution, completely controlled by the numeric control and equipped with an automatic delivery pump and devices which check that lubrication has been carried out as well as the minimum level in the tank. The numeric control manages lubricant delivery at programmed intervals and automatically interrupts all machine functions if lubrication is not carried out due to any errors. The centralized system guarantees correct, prompt lubrication of all the parts which require it, guaranteeing that they continue to function correctly.

CONTROL UNIT

The control unit is the NUM series 1000 numeric control with integrated Office PC (Personal Computer Desktop) with XILOG PLUS software interface. The NUM with Office PC solution combines all of the qualities of numeric controls with the user-friendliness typical of personal computers. NUM numeric controls are normally used in high precision machine tools which require considerable calculation power and program execution speed for maximum interpolation quality.

The Office PC makes machine controls much simpler, since it allows the use of the XILOG PLUS interface, the software developed directly by SCM to make programming simple and fast even for the less expert operator, allowing use of the full potential of Windows compatible personal computers, including:

- Remote-assistance using the Telesolve service (standard)
- Possibility of connecting to a network with the company information system
- Use for any purpose, even if not connected to machine control

ADVANTAGES AND BENEFITS

***15" color monitor.**

***Memory of programs directly at control panel.**

***Can download programs using either a RS232 port, network or a 3.5" floppy disk.**

ROUTING UNIT**POWER 2000 electro-spindle**

- HSK F 63 quick release toolholder
- spindle speed: 900-18000 rpm
- motor power: 11 kW (15 Hp) at 9000 rpm
- right and left rotation
- static inverter for stepless speed and rapid shutdown of rotation
- liquid cooled
- exhaust hood around whole perimeter
- no. 12 toolholders for fixing cylindrical shank tools
Collets supplied:
 - 4 ea. with diameter 19/20 mm (ER 32)
 - 4 ea. with diameter 12/13 mm (ER 32)
 - 4 ea. with diameter 5/6 mm (ER 32)

WORKTABLE

- Multi-purpose aluminum table has right-angle milled slots for the insertion of rubber sealing gasket, moduleset, and retractable reference stops.
- Threaded holes on steel bushings for vacuum fixing, anchoring of equipment, and vacuum cups.
- Moduleset components supplied as standard:
 - 24 each L=93mm H=20mm
 - 8 each L=46mm H=20mmh
 - 8 each attachments
 - 2,240 mm (88") linear development
- Pneumatic devices operating unit with quick fitting connections (1+1 for each half of the table) for double compressed air circuit and pendulum machining.

AXES TRAVERSE

- Axes driven by AC digital drives and "brushless" type motors
- Ground screws and preloaded ball screw assembly
- Prismatic guideways and sliding blocks with preloaded recirculating balls
- CNC controlled automatic lubrication system
- rapid traverse of X axis: 80 m/min. (3,150 in/min)
- rapid traverse of Y axis: 57 m/min. (2,245 in/min)
- rapid traverse of Z axis: 25 m/min. (985 in/min)

CONTROL UNIT

Control panel integrated in electrical cabinet

Mobile control with main operating features to operate machine independent of controller

CNC Control Unit:

- NUM 1000 controller
- Program memory 128 KB

PC Office: Minimum Guaranteed Specifications

- Operating system Windows 98
- 15" color display
- Qwerty keyboard
- Minimum 1000 MHz microprocessor
- Hard Disk 20 Gb
- RAM Memory 128 Mb
- Floppy disk 3.5" 1.44 Mb
- CD-Rom 52 x
- Integrated network card 10/100 MHz

XILOG PLUS INTERFACE

- workpiece geometry programming by graphic editors with simultaneous translation in machine language
- automatic program execution in drip-feeding mode with visualization of the instruction in progress
- execution of multi-concatenated programs (MIX)
- machine controls manual mode execution (MDI)
- program editor (free text format, guided editor, graphic editor, copy / paste / replace functions)
- machine parameters configuration with security passwords
- subprograms and user macro management
- management of operator messages, diagnostics, run time and interactivity
- report files (production, diagnostics)
- bar code management
- .DXF files import (AutoCAD etc.)
- drilling optimizer
- tool changer number optimizer within the program
- supplementary tool changer management optimizer
- multi-tool equipment management
- ISO programs management by NUM graphic simulation
- NUM-JERK function management for dynamic control of accelerations/decelerations

SAFETY DEVICES

- pressure sensitive safety mat preventing any accidental contact between operator and moving parts
- protection along whole perimeter of head unit, with transparent double-layer anti-ejection bars and window for access to machining units
- fence along whole rear perimeter with access door to rear of machine and with safety switch
- pendulum machining is allowed

SERVICE SPECIFICATIONS

- Service voltage: 208/230/460 Volts, 3 phase, 60 HZ (to be specified at placement of order)
- centralized exhaust outlet connection:
 - diameter: 250 mm
 - capacity: 5400 m³/h
- exhaust air speed:
 - 30 m/sec
- air pressure:
 - 7 bar (105 PSI) at 10 CFM

MACHINE CUSTOM EQUIPPED WITH THE FOLLOWING:**55.00.70 Rapid 12 - 12 position tool changer**

It consists of a circular tool magazine placed in the rear part of the machine, in parallel to the standard tool magazine, and provided with independent movements for tool selection and insertion.

Technical features:

- 12 stations
- center distance between stations 88 mm
- maximum weight per tool 6 kg
- maximum weight on tool magazine 36 kg
- possibility of magazine equipment:
 - no. 12 tools 85 mm diameter
 - no. 6 tools 165 mm diameter
 - max. tool diameter 230 mm

45.11.44 F 18 - Drilling unit with 18 spindles

This rigid and compact structure has been especially designed to enable drilling of even solid wood. The unit is equipped with an independent vertical ON-OFF movement which considerably reduces drilling time.

Technical specifications:

- 12 independent vertical spindles (7 right and 5 left)
- Attachment for vertical bits: M 10 / 11 mm diam.
- 6 horizontal spindles (2+2 along X axis and 1+1 along Y axis) (3 right and 3 left)
- Attachment for horizontal bits: M 8 / 9 mm diam.
- Center distance between spindles: 32 mm
- 4000 r.p.m.
- 2,2 kW motor
- vertical ON/OFF pneumatic stroke of whole unit: 235 mm
- vertical ON/OFF pneumatic stroke of each spindle: 60 mm
- exhaust hood around whole perimeter

35.08.39 600 mc/h high capacity vacuum (8.5 kw)

High capacity vacuum is the best solution for cutting panel contours, because it enables the machining of chipboard, mdf, plywood panel parts of extremely reduced dimensions (frames for living-room furniture, speakers etc.), without using fixing devices.

Machine is equipped with a conduction system (valves and pipes) properly measured and studied, in order to guide all the vacuum produced by the pumps towards a semi-table or the whole worktable, if necessary.

Technical specifications of each pump (no.2 total):

- output: 300 m³/h
- motor power 8.5 kW
- max. vacuum delivery at pump outlet: 0.9 bar
- indicative noise level 83 dB (A)

14.15.28 Centralized exhaust system

All the exhaust outlets from the machine are ducted into one single 250 mm diameter outlet. Each machine outlet is fitted with an automatic valve controlled by the CNC to operate on the head working at the time.

88.02.46 Modulset H=20 mm (2240 mm. linear development)
It consists of a set of modular elements to be inserted in the grooves of the worktable. They can be joined to each other so as to easily and quickly build a support reproducing the exact shape of the piece to be machined. The modules are available in two different lengths, in order to offer greatest versatility even in the case of workpieces with a complex shape. Appropriate supplementary inserts serve as additional attachments to ensure utmost stability of the support.

- no. 24 l=93 mm h=20 mm
- no. 8 l=46 mm h=20 mm
- no. 8 attachments base.
-

88.07.78 Perimeter reference stop **6 ea.**
Retractable reference stop that can be positioned along the whole perimeter of the multi-function worktable and compatible with modulset, MPS suction cups or counter templates of 50 mm max thickness.

19.03.10 Air conditioner for electrical cabinet
Compulsory for environment temperature over 35° C

PRICE**Machine Price F.O.B. Duluth, GA:
Installation Included****\$ 138,436.00 USD**

The above price is subject to change if the specifications for the machinery are hereafter changed at the request of the Buyer.

The above price is exclusive of any State or Local Sales/Use Tax.

PAYMENT TERMS

All payments to SCM GROUP USA INC. will be made in U.S. dollars.

Purchase order referencing this "offer to sell" with the following terms:

- 30% Down payment with signed SCM GROUP USA INC. sales order.
- 30% Due upon shipment of machine from factory.
- 30% Due prior to shipment from Duluth
- 10% Due upon completed installation of machinery at your facility.

If you are considering leasing as an option to fund this purchase, please contact the SCM GROUP USA INC. Leasing Department at (770) 813-8818 for information about their leasing programs. A leasing quote and application are included in this proposal.

INSTALLATION AND TRAINING

Installation is included at no additional cost to the customer. The customer is responsible for unloading, uncrating, and placement of the machine as well as for making power, compressed air, and dust extraction available before installation is begun. The customer is also responsible for providing enough material to run tests. You will be sent a Pre-Installation Letter with a Checklist shortly after we receive your Purchase Order and down payment for the machine. The items indicated on the Checklist must be verified and/or in place before a technician is dispatched to begin installation. Standard hourly rates, for the technician, will be charged if the machine site is not ready for installation at the time of technician's arrival at customer site.

-One week training class held at SCM GROUP USA INC. training center in Duluth, GA. This training covers all aspects of software training involved in the machine. Up to two employees may be sent to the training class, which is held once per month at the SCM training facility. Travel and lodging expenses are to be covered by the customer.

-One week training and installation directly at customer site. This takes place after the machine has been put into place in customer facility. A certified Routech technician will be at the customer's facility to train and put machine into production ready state. Additional software, control, and application training will be provided during this period.

This allows for two full weeks of training for the customer.

GENERAL TERMS AND CONDITIONS:

This quotation replaces all previous verbal and written understandings, and the specifications and representations contained herein are the sole understanding between your company and SCM Group USA.

All equipment offered is manufactured to Metric standards. Dimensions shown in English measure are approximate and provided only for the convenience of quick conversion from Metric measures.

SCM requires the machine parts to be positioned next to the installation site. The site shall be clear from impediments of any nature and shall be made of a leveled concrete floor or similar floor. Electrical power, efficient electrical ground, compressed air, dust extraction, as required by the machine specs, shall be available at the site and in accordance with the drawings supplied with the machine.

SCM is not responsible for any masonry, fabrication, or similar work that might be needed to make the site appropriate for the installation of the machine. Appropriate and sufficient dust collection will be needed to run actual cutting tests with the machine.

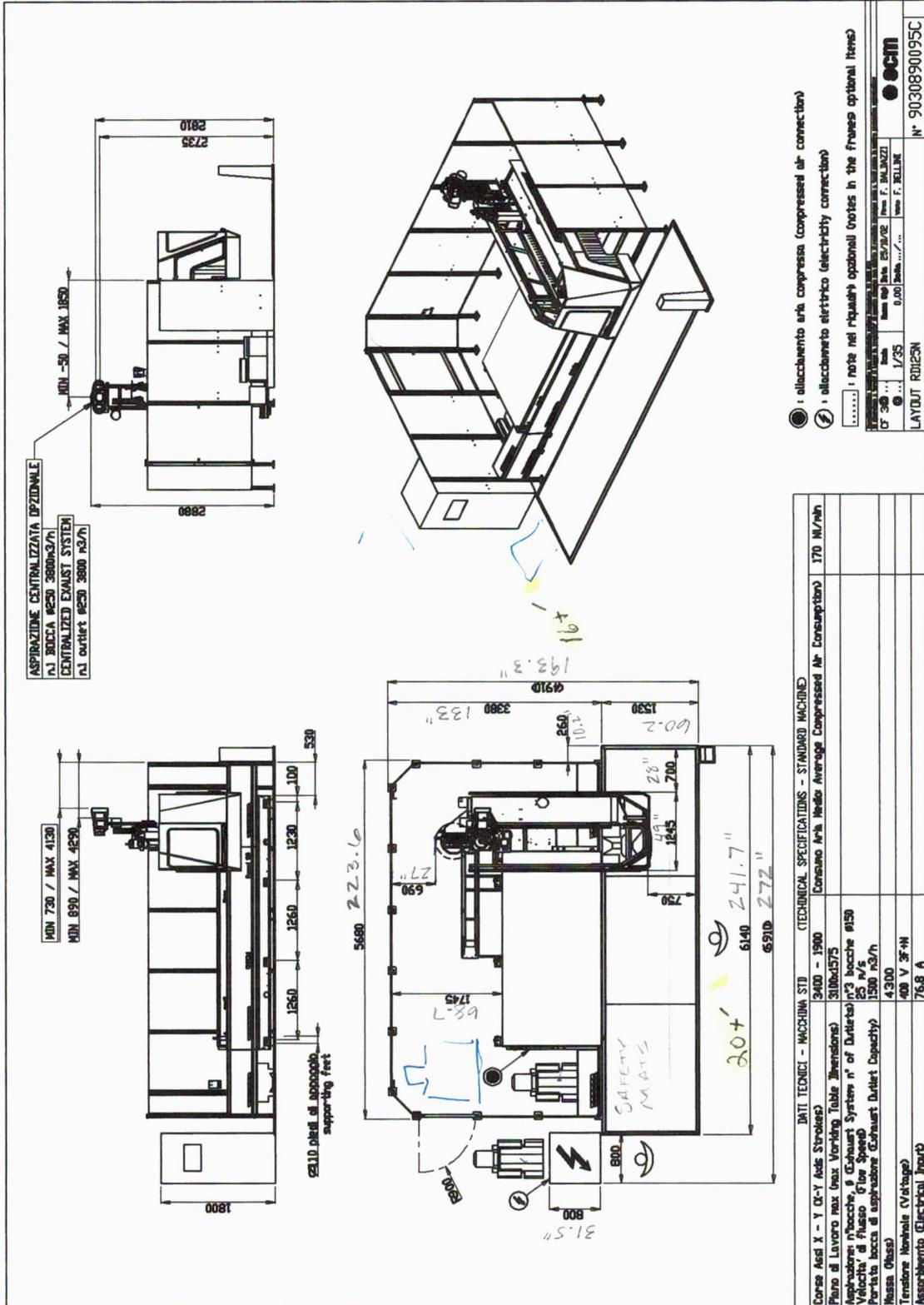
The customer shall be responsible for the following:
Ground works, connections to power supply, electrical ground, compressed air, dust extraction, and machine fastening to the floor.
Labor force and handling equipment (crane, fork lift, etc.) to unload, uncrate, and install the machine.
Enough material to run actual tests.

SCM Group USA Inc. standard sales terms and conditions are applicable

The price quoted is for the machine as described above and is subject to change if the specifications for the machine are changed at the request of the buyer. The Price Quoted Is Subject To Prior Sale.

See Additional Terms and Conditions for full warranty information.

This Offer to Sell supersedes all previous verbal and written offers, proposals, quotations and/or specifications.



● : allacciamento aria compressa (compressed air connection)
 ⚡ : allacciamento elettrico (electricity connection)
 : note nei riquadri opzionali (notes in the boxes optional items)

Nome e Cognome: F. BALMAZZI
 Data: 1/23
 0,00 Italia ...
 F. BALMAZZI
 F. BALMAZZI
 N° 9030890095C

LAYOUT RIDGES

DATI TECNICI - MACHINE STI (TECHNICAL SPECIFICATIONS - STANDARD MACHINE)	
Corse Assi X - Y (X-Y Axis Strokes)	3400 - 1900
Piolo di Lavoro max (max Working Table Dimensions)	3100x1575
Aspirazione (Piacche & Colonnati) n° di Dutture (n° of Ducts) (n° of Suckers)	25 n°/s
Velocità di Flusso (Flow Speed)	1500 m ³ /h
Portata bocca di aspirazione (Exhaust Duct Capacity)	4300
Pressione (bars)	400 V 3F-N
Tensione Nominale (Voltage)	76.8 A
Assorbimento Elettrico (Input)	
Consumo Aria Media Average Compressed Air Consumption	170 Ml/min

MM = inches
25.4

SAFETY DEVICES

- pressure sensitive safety mat preventing any accidental contact between operator and moving parts
- protection along whole perimeter of head unit, with transparent double-layer anti-ejection bars and window for access to machining units
- fence along whole rear perimeter with access door to rear of machine and with safety switch
- pendulum machining is allowed

SERVICE SPECIFICATIONS

- Service voltage: 208/230/460 Volts, 3 phase, 60 HZ
(to be specified at placement of order)
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 - capacity: 5400 m3/h
- exhaust air speed:
 - 30 m/sec
- air pressure:
 - 7 bar (105 PSI) at 10 CFM

125
AmPs

MACHINE CUSTOM EQUIPPED WITH THE FOLLOWING:

55.00.70

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Technical features:

- 12 stations
- center distance between stations 88 mm
- maximum weight per tool 6 kg
- maximum weight on tool magazine 36 kg
- possibility of magazine equipment:
 - no. 12 tools 85 mm diameter
 - no. 6 tools 165 mm diameter
 - max. tool diameter 230 mm

VERTICAL SPINDLES ON 32MM CENTERS

