

Bench top Vertical Machining Centre

# 190VMCxi



## A bench mounted CNC Vertical Machining Centre designed for educational and training installations

The PC controlled Boxford 190VMCxi is ideally suited to a classroom environment and offers the perfect solution for high tech. education and training requirements. The rigid construction allows steel to be cut to close tolerances. The inclusive user-friendly software has routines for Computer Aided Design [CAD] at both simple and sophisticated levels and will process the drawings through to a full machining routine.

### CNC features

- The Boxford software is an integrated suite of powerful CAD/CAM tools.
- The CAD provides a variety of drawing tools including text fonts with excellent manipulation routines.
- Drawings from other CAD applications can also be imported and processed. A full 3D simulation of the manufacturing process, including a cycle time, can be shown enabling work to be proven without the need for trial runs on the machine. Manual Data Input, utilising Industrial Standard Codes, allows programs to be entered using either line by line or conversational programming.
- Incorporates hardware capable of continuous 3 axis movement utilising the latest Continuous Path Manufacturing technology. This allows large programs, imported from Major CAD/CAM packages, to be machined efficiently and is an essential machine feature for successful Rapid Prototyping of 3D reliefs.
- Excellent Z axis travel for 3D manufacture and rigid machine construction allows the use of high material removal rate strategies producing a component throughput lighter machines cannot match.
- Touch sensitive control panel incorporating illuminated push buttons allows the machines to be operated without a computer.
- Active and accurate tool path graphics continuously displayed line by line during program write, test run and manufacture.

### Safety equipment and features

- Full perimeter guarding with interlocking switches on access doors arranged in the positive (safety) mode for spindle stop and feed hold.
- Overload cut-out on spindle drive.
- Positive end stops on all axes.
- Mandatory graphics run required for new programs before machining cycle can be commenced and step by step graphics in advance of cut in machining cycle.
- Integrated electrical panel with no volt supply protection.
- Feed rate override.
- Feed hold.
- Single block operation.
- Latching emergency stop button.
- Power on indicator lamp.
- Low voltage control circuitry.

## Machine specification



X Axis Travel (longitudinal)	225mm
Y Axis travel (cross)	150mm
Z Axis travel (vertical)	140mm
Table Area	410 x 130mm
Spindle to Table	202mm
Centre Line of Spindle to Column	130mm
Table to Column	5 to 155mm
Tee Slots	2 x 10mm x 100mm Centres.
Spindle motor	450 watts
Spindle speed	350 - 3500 rpm
Electrics	110/220/240 V 1 Phase
Programmable feed (linear and circular interpolation modes)	0 - 2000mm/min
Rapid feed rate at 100%	2000mm/min

Rigid dovetail slide construction.

Pre-loaded anti backlash balls screws on all axes.

Three axis simultaneous operation.

Fully enclosed see through guarding for safety and improved viewing.

Integrated electrical panel.

Steel, Brass, Aluminium and Plastic cutting capability.

## Accessories

Accessories are available, including:-

Automatic 6 Station Tool Changer

Vice - 100 x 75mm capacity  
- Power Vice

Chucks - 80mm 3 Jaw  
- 100mm 4 Jaw Independent  
- 125mm 3 Jaw

Comprehensive Set of Toolholders

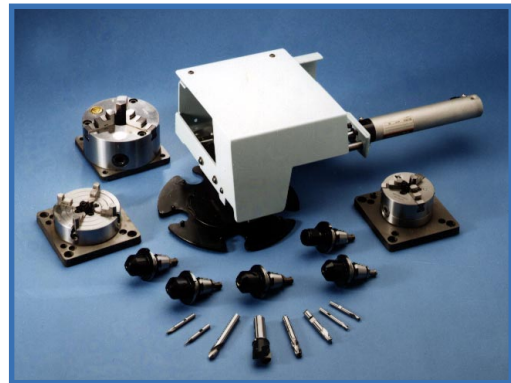
Comprehensive Set of Tooling

Emergency Footswitch

Airmist Coolant

Heavy Duty Workbench with Braked Castors.

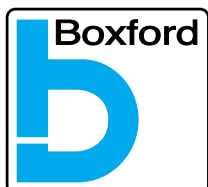
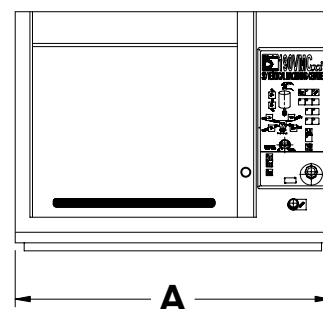
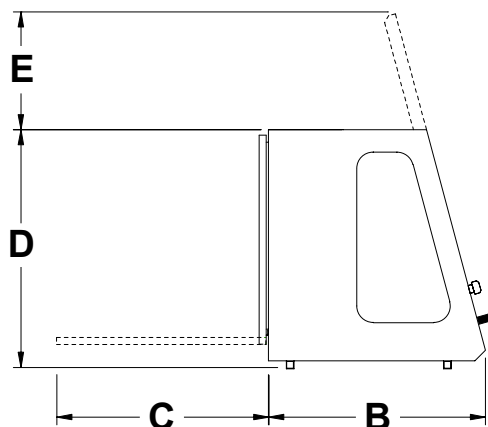
FMS/CIM Connectivity



## Machine Dimensions

A	890mm	D	680mm
B	610mm	E	340mm
C	600mm		

Machine Weight - 150kg (330lbs)



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