

Combined Turning & Milling
DUET



A unique dual purpose CNC training machine specifically designed for educational requirements

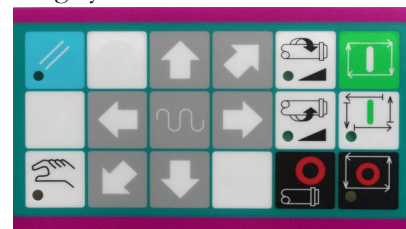
The PC controlled Boxford Duet is a unique machine, which is both a CNC Lathe and a CNC Milling machine. Critical components of the machine are moulded from the latest advanced composite materials, giving high strength, rigidity and precision. Operating on IBM/100% compatible computers, the inclusive user-friendly software has routines for Computer Aided Design [CAD] at varying levels and will process the drawings through to a full machining routine. Seamless links to 3rd Party CAD/CAM systems are also provided.

CNC features

- The Boxford software is an integrated suite of powerful CAD/CAM tools.
- The CAD includes the handling of most 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 cutting. Manual Data Input allows programs to be entered using world standard industrial G & M codes.
- As with all Boxford PC machines, the DUET incorporates hardware capable of continuous 3 axis movement and utilises Continuous Path Manufacture allowing large programs, imported from Major CAD/CAM packages, to be machined extremely efficiently. This is particularly useful for Rapid Prototyping of 3D reliefs.
- Touch sensitive control panel incorporating illuminated push buttons allows the machine to be operated without a computer.
- Active and accurate tool path graphics continuously displayed line by line during program simulate, write, 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 cutout 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.



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Machine specification



Slant-bed configuration in lathe mode.

6 Position programmable turning toolchanger.

4 Position programmable drilling/boring toolchanger.

Programmable lathe spindle speeds in RPM, M/min or in/min.

Programmable lathe feedrates in mm/min, in/min, mm/rev or in/rev.

80 mm diameter 3 jaw chuck.

Quick change vice for mill workholding.

Three axis simultaneous operation in milling mode.

Homing switches fitted to all axes facilitating automatic setup in manufacture.

Fully enclosed see through guarding for safety and improved viewing. Standard Low Volt Light.

Lathe and Mill Tooling Starter Pack Included.

Unique conversion from Lathe to Milling machine in less than one minute.

LATHE *specification summary*

Swing Over bed	225mm (8.75")
X Axis travel	125mm (5")
Z Axis travel	360mm (14")
Distance between centres	330mm (13")
Spindle bored to pass	20mm (0.75")

MILL *specification summary*

Axis travel	X(longitudinal)	125mm (5")
	Y(cross)	75mm (3")
	Z(vertical)	260mm (10")
Table Dimensions		180 x 110mm (7" x 4.33")

Spindle motor	320 watts
Programmable and variable Spindle speed	200 - 2500 rpm
Electrics	110/240v 1 PHASE
Programmable feed (linear and circular interpolation modes)	0 - 500mm/min
Rapid feed rate at 100%	500mm/min

Accessories

Accessories are available, including:-

Tailstock Steady.

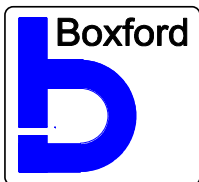
Spindle centre and carrier..

T Slotted Milling Table.

Comprehensive Set of Lathe Tooling.

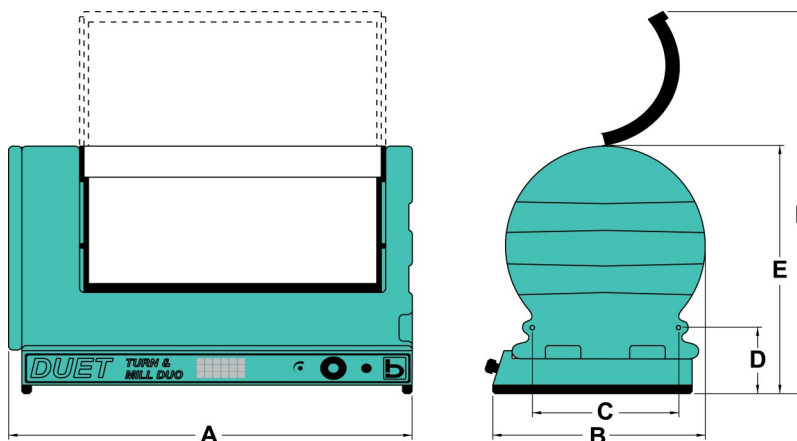
Comprehensive Set of Mill Tooling.

Workstation (bench) with braked castors.



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Machine Dimensions

A	890mm
B	470mm
C	350mm
D	150mm
E	550mm
F	920mm

Machine Weight

65kg (143lbs)