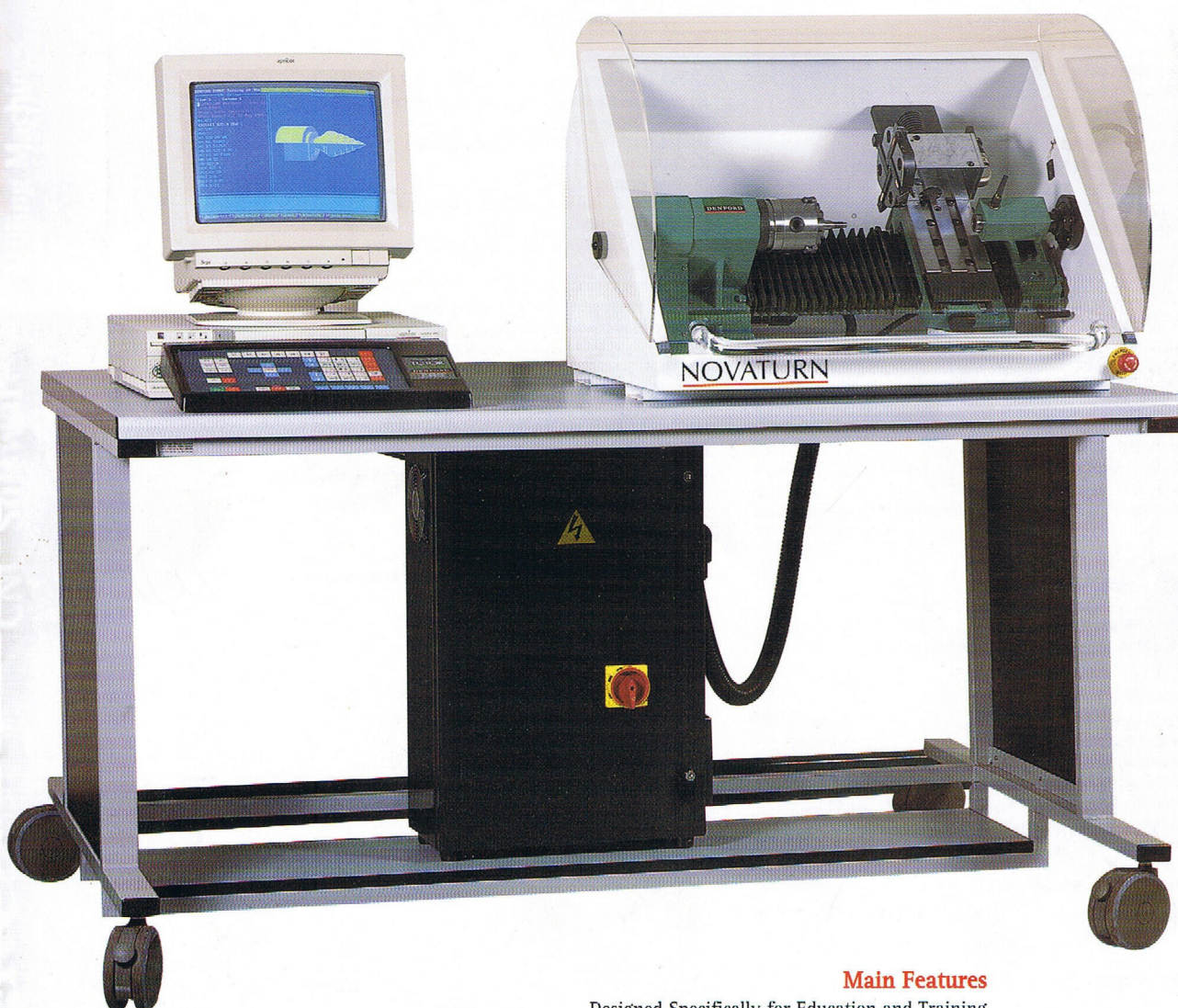


DENFORD

# Novaturn

A Compact 2 Axis CNC Lathe  
Suitable for all Levels of Education and Training



## Main Features

- Designed Specifically for Education and Training
- Manufactured to Industrial Standards
- Capable of Cutting Resistant Materials such as Wax, Plastics, Acrylics, Copper, Aluminium and Steel
- Links to CAD/CAM Software
- Totally Enclosed High Visibility Interlocked Guard
- CE Approved for Safety
- Programming via ISO Format, Incorporating Industrial Standard Controls such as Fanuc
- Optional 8 Station Programmable Turret
- Option of Including in FMS and CIM Systems

[www.denford.com](http://www.denford.com)

Computer Integrated Manufacturing  
CAD/CAM SOFTWARE

Video Conferencing  
TECHNICAL SUPPORT



# Novaturn

A Compact 2 Axis CNC Lathe  
Suitable for all Levels of Education and Training

## Standard Equipment

Novaturn  
Electrical Power Box  
Quick Change Toolpost and Holder  
Operating Software, Desk-Top Tutor and Programming Software  
Installation, Maintenance and Instruction Manuals  
Set of Maintenance Tools and Spare Parts List  
Machine Commissioning and Basic Instruction  
Manual Self Centering 3 Jaw Chuck  
Set of Outside Jaws  
Swarf Tray

## Extra Equipment

CAD/CAM Software and Manuals  
Courseware and Project Books  
8 Station Programmable Turret  
Various Tooling Packages  
Training  
Additional Off-Line Programming Software  
Machine Work Bench  
Video Conferencing System  
PC and PC Workstation  
Pneumatic Chuck  
Pneumatic Guard  
Spray Mist Coolant  
Tailstock

## Safety Features

Totally Enclosed High Visibility Interlocked Guard  
Emergency Stop Button  
Toolpath Graphics to Verify Program Prior to Machining  
Membrane Keyboard  
Isolator Switch  
Axes Limit Switches

## Mechanical Details

Swing Over Bed	160mm (6 1/4")
Swing Over Cross Slide	80mm (3")
Distance Between Centres	270mm (10 5/8")
Travel X Axis	140mm (5 1/2")
Travel Z Axis	225mm (8 7/8")
Spindle Bore	21mm (7/8")
Spindle Taper	No. 3
Tailstock Taper	No. 2
Ball screws (X & Z)	16mm (5/8") 5mm (0.2") Pitch

## Electrical Details

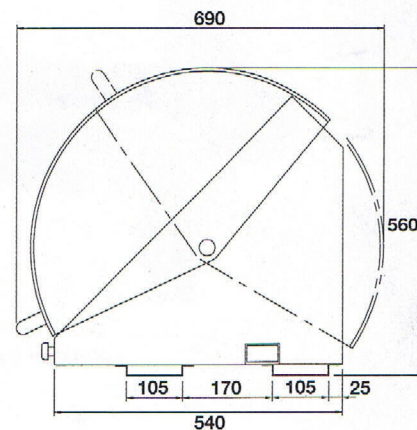
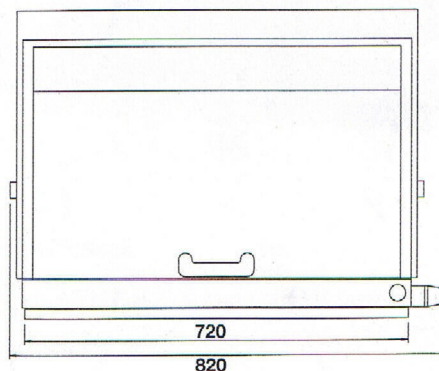
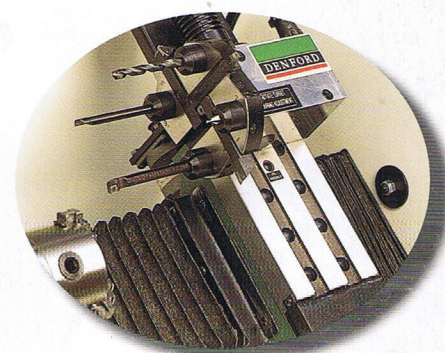
Mains Supply Required  
50/60HZ - 1 Phase - 220/240 Volts - 10 AMP  
Spindle Motor 1.5 HP  
Axes Motor Stepper Motors - 200 steps/rev

## Dimensions

Machine Length	820mm (32 1/4")
Machine Depth	690mm (27 1/4")
Machine Height	560mm (22")
Machine Weight	88Kg (195lb)
Power Box Length	480mm (19")
Power Box Depth	230mm (9 1/8")
Power Box Height	640mm (25 1/4")
Power Box Weight	35Kg (77lb)
Length of Cable between Machine & Power Box	1500mm (59")

## Control Software Features

1. Industrial Style Programming through Desk-Top Tutor or QWERTY Keyboard
2. Programming Format Choice Available on Fanuc (Windows & DOS)
3. MDI Programming Facility
4. Full Circular and Linear Interpolation
5. Imperial or Metric Programming
6. Subprogram with Repeat Facility/Program Call
7. RS232 Link
8. Manual and Programmable Machine Stops
9. Datum Shift
10. Output to Printer and/or Plotter
11. Tool and Workpiece Offsets can be Saved to Disk
12. Program Verification via Dry Run Facility
13. Full G and M Code Listings with Context Sensitive Help
14. Single Block or Auto Execution
15. Block Skip Function
16. Block Search Facility
17. Comprehensive Toolpath Graphics including 2D and 3D Colour Simulation, Toolpath Plot and Machining Process Simulation with Tool Animation
18. Zoomed or Sectioned Views with Rotation
19. Directory Listings
20. Program Merging Facility
21. Full Edit Mode allowing Alter, Delete and Insert
22. Programs Stored on Floppy and/or Hard Drive
23. Editor Memory 64K
24. Automatic Error Checking with Messages
25. Cycle Start/Feed Hold
26. Programmable Dwell
27. Continuous and Incremental Jog Modes with Variable Feedrates
28. Screen Axis Display gives Absolute or Distance To Go Values
29. Auxiliary Inputs & Outputs
30. Drip Feed Facility from File Format Data
31. Overtravel Limits and Emergency Stop
32. Control can be Integrated into Local Area Networks allowing Access to Shared/Group Program Data
33. Control Text can be Loaded into a Word Processor for Translation into Different Languages
34. Programmable Spindle Speeds 0-3500rpm
35. Spindle Speed Override 50-120%
36. Programmable Feedrate (0-1000mm/min on X Axis) (0-1500mm/min on Z Axis)
37. Feedrate Override 0-150%
38. Constant Surface Speed
39. Simultaneously Controlled X and Z Axes
40. Combined use of Absolute or Incremental in the Same Block
41. Internal/External Screwcutting
42. Diameter or Radius Programming
43. Canned Turning Cycles
44. Roughing and Finishing Cycles
45. Tool Offsets for 16 Tools
46. Incremental Tool Wear Compensation
47. Tool Nose Radius Compensation



## Total Commitment to Manufacturing Technology in Education and Training Worldwide

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