Computer Integrated Manufacturing

CAM SOFTWARE

Video Conferencing ENGINEERING

technical support

DENFORD

Novamill

A Compact 3 Axis CNC Bench Milling Machine
Suitable for all Levels of Education and Training

DENFORD

NOVAMILL

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 Sofware
Totally Enclosed High Visibility Interlocked Guard
CE Approved for Safety
Programming via ISO Format, Incorporating Controls such as Fanuc and Heidenhain
Optional 6 Station ATC Option of Including in FMS and CIM Systems

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Novamill

A Compact 3 Axis CNC Bench Milling Machine
Suitable for all Levels of Education and Training

Standard Equipment

Novamill
Electrical Power Box
Quick Change Tool 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

Extra Equipment

CAD/CAM Software and Manuals
Courseware and Project Books
6 Station Automatic Tool Changer
Various Tooling Packages
Training
Additional Off-Line Programming Software
Machine Work Bench
Video Conferencing System
PC and PC Workstation
Pneumatic Vice
Pneumatic Guard
Spray Mist Coolant
Compressor

Safety Features

Totally Enclosed High Visibility Interlocked Guard
Emergency Stop Button
Toolpath Graphics to Verifty Program Prior to Machining
Automatic Tool Retraction and Spindle Stop for Tool Change
Membrane Keyboard
Isolator Switch
Axes Limit Switches

Mechanical Details

Table Size	360 x 132mm (14 x 5")
Working Envelope	225 x 150mm (9 x 6")
Travel X Axis	225mm (9")
Travel Y Axis	150mm (6")
Travel Z Axis	115mm (4¹/₂")
Spindle to Table	190mm (7¹/₂")
Spindle to Column	125mm (5")
Spindle Taper	ISO 30
Manual Tooling	Quick Change
ATC Tooling	BT 30
2 Tee Slots	10mm (³/₈") Width 50mm (2") Centres
Ballscrews (X, Y & Z)	16mm (⁵/₈") Diameter 5mm (0.2") Pitch

Electrical Details

Mains Supply Required
50/60HZ - 1 Phase - 220/240 Volts - 8 AMP
Spindle Motor 0.5 HP
Axes Motor Stepper Motors - 200 steps/rev

Dimensions

Machine Length		1020mm (41")
Machine Depth		840mm (35")
Machine Height		660mm (25¹/₂")
Machine Weight		170Kg (375lb)
Power Box Length (+ATC)	420mm (16⁵/₈")	620mm (24¹/₂")
Power Box Depth (+ATC)	220mm (8³/₄")	315mm (12¹/₂")
Power Box Height (+ATC)	640mm (25¹/₄")	640mm (25¹/₄")
Power Box Weight (+ATC)	25Kg (55lb)	52Kg (115lb)
Length of Cable between Machine & Power Box		1500mm (59")

NOTE: *Features only with Heidenhain Control

Control Software Features

1. Industrial Style Programming through Desk-Top Tutor or QWERTY Keyboard
2. Programming Format Choice Available on Fanuc and/or Heidenhain Keypads (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 (0-1500mm/min on X and Y Axis) (0-500mm/min on Z Axis)
37. Feedrate Override 0-150%
38. Constant Surface Speed
39. Simultaneous 3 Axes Continuous Path Eliminating Dwells between Program Blocks
40. Combined use of Absolute or Incremental in the Same Block*
41. Circular and Rectangular Pocket Milling
42. Peck Drilling Cycles
43. Q Parameter Programming
44. Tool Length Offsets for up to 32 Tools
45. Mirror Imaging
46. Simulation with Tool Animation
47. Tool Radius Compensation
48. Programming using Polar or Cartesian Co-ordinates*
49. Slot Milling Cycles*
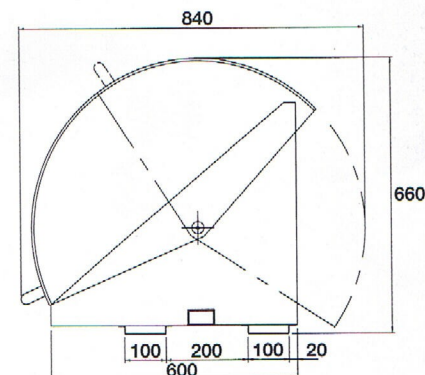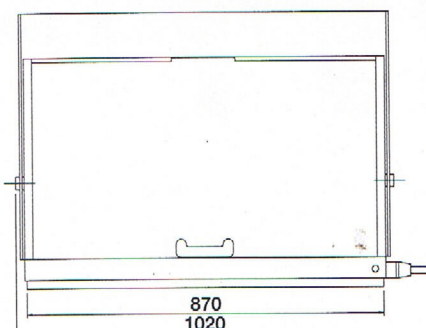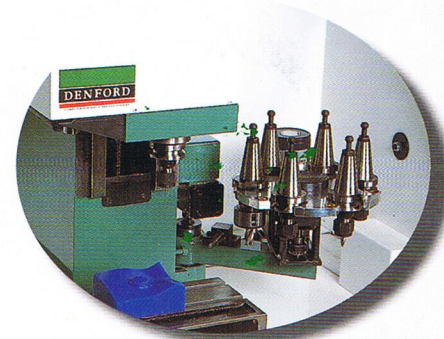
Total Commitment to Manufacturing Technology in Education and Training Worldwide

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