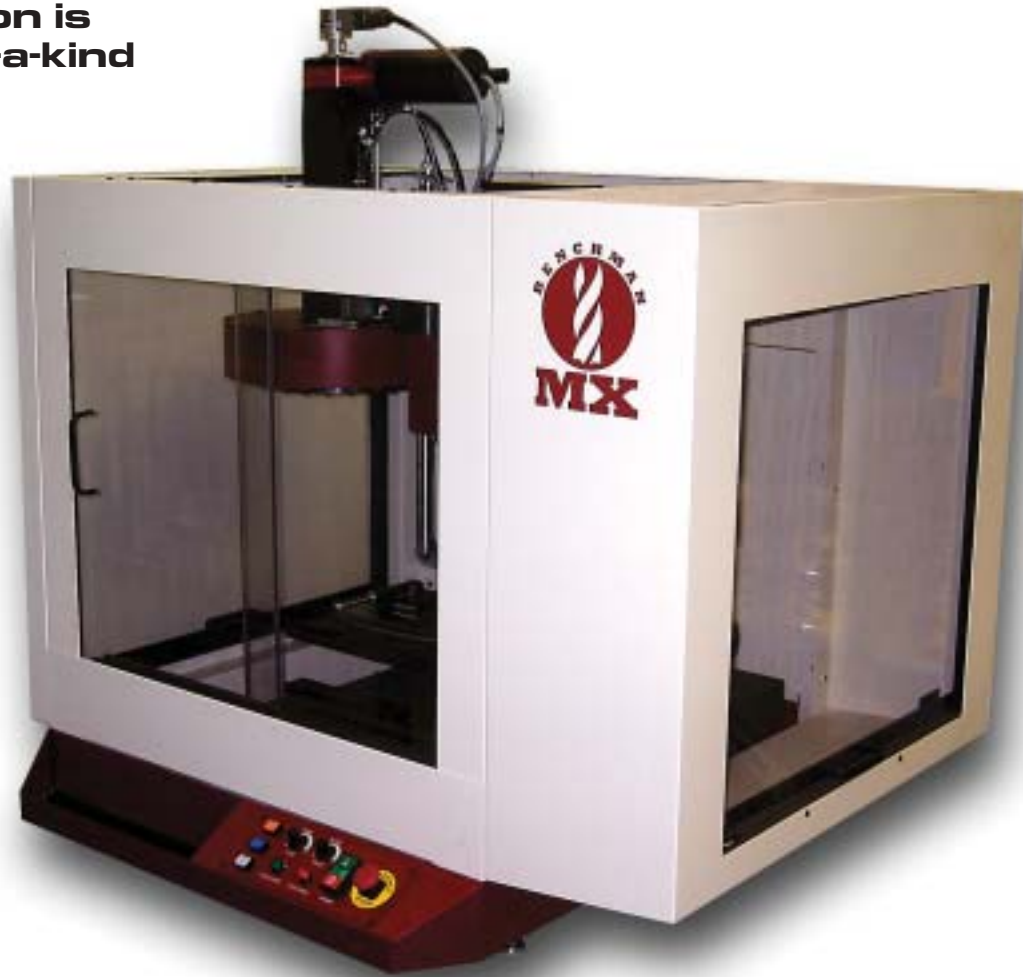


Benchman MX

CNC Machining Center

**your application is
one-of-a-kind**



**build your machine for
the job you need done**

You need the right tool for the job. But sometimes finding one tool that serves the needs of your unique applications can be a challenge.

Power. Precision. Scalability. Affordability. If you could find a solution with just the right combination of all the above... that would be **perfect**.

With more than 1,000 available configurations, the new **Benchman MX** has the flexibility to become the perfect tool for your needs.

The MX delivers an advanced **modular** concept in benchtop CNC machining: simply identify the critical needs of your application, then add the features and options that meet those specific needs.

No more, no less.

And with its unrivaled selection of available options and configurations, the MX will deliver the best solution for whatever machining challenges you face.

So you never pay for capabilities you don't need.

And with the unmatched scalability of the MX, you never sacrifice the ability to add features as your demands evolve.

So if you're looking for the perfect tool for your application, check out the **Benchman MX**.

With 20 years of experience and more than 12,000 machines installed worldwide, intelitek has earned its reputation as a leader in factory automation solutions.

intelitek ▶▶

it's what you make it.

www.benchman.com

What are the demands of your machining application? Make the Benchman MX the solution. With an unrivaled selection of features and options to choose from, the Benchman MX is what you make it.

The most user-friendly control in the industry



- Customizable interface
- Easy-to-read dockable palettes
- On-screen editor
- On-line help
- Graphic tool library
- Tool height setup wizard
- NC program runtime calculation
- Realtime 3-D solid tool path verification
- 32-bit multi-tasking control
- Compatible with most popular CAM systems
- Scaling, rotation, mirroring, subroutines
- Program in metric or imperial
- Canned cycles for drilling, boring, and tapping
- Cutter length / diameter compensation
- Infinite part program length
- Macro programming



Built to handle the most demanding jobs

Options for every application



The one-piece **granite co-polymer base** and column is eight times more resistant to vibration than cast iron, ensuring more accurate cuts, smoother finishes and extended tool life.



Profile linear ball bearing guideways provide excellent rigidity, positioning and contouring accuracy.



45,000 RPM Spindle

Direct drive, liquid cooled, high-frequency spindle



Digitizing Package

Precision probe for reverse engineering; collect surface information from an existing part and output to NC code, DXF, or text.



Tool Length Offset Probe

Monitor tool wear and breakage, and adjust for varying tool lengths in multiple tool programming



Rotary 4th Axis

True servo axis with control allows 4-axes simultaneous machining

Configuration Matrix

Spindle		
1 HP:	5,000 rpm	○
	10,000 rpm	○
	39,000 rpm	○
2 HP	5,000 rpm	○
	7,500 rpm	○
2.66 HP	45,000 rpm	○
Tooling		
Manual		○
Quick change		○
Tool changers		
Table mounted:	4 position	○
	5 position	○
Carousel :	12 position	○
	20 position	○
Enclosure		
Open machine with safety shield		○
Standard enclosure		○
Graphite enclosure		○
Coolant enclosure		○
Machinists light for enclosure		○
Additional options		
18" extended X-axis cross slide		○
Simultaneous 4th axis control		○
Automatic bar feeder for 4th axis		○
Micro-mist coolant		○
Tool length offset sensor		○
Benchman tooling supplies		○
CAN bus I/O modules		○
Air vise		○

Determine your requirements and consult the factory for pricing.

Features

Standard Features
Granite co-polymer one-piece base and column
Precision-ground cast iron table
Linear ball bearing guideways
Laser calibrated for optimum accuracy
1HP 5,000 rpm spindle
Zero-backlash ballscrews
Covers on slideways and ballscrews
Thread milling
12" x 7" x 9.5" travel, 12" open height
230V single-phase standard connection
48" x 34" footprint
Superior ergonomics for small part production
Front operator panel for easy set-ups
Computer keyboard functions as a pendant
User-friendly Windows control software
32-Bit Digital Signal Processor motion control card
Safety Features
Safety shield with interlock switch
Emergency stop switch on front panel
End of travel stops on each axis
Low air pressure sensor

Requirements

Computer System (Computer not included)
Pentium IV 2 GHz
Windows XP Pro
256MB of RAM
20MB available HD space
CD-ROM drive
Serial port
Full-length PCI slot
VGA graphics controller and monitor
Mouse
Power
240 VAC, (+5% -10%), 50-60 Hz, 20A, single phase
ATC Air Supply
90 psi (620 kPa)
1/4" NPT female connection provided

Machine Specifications:

Axis Travel		
X Axis	12" or 18"	(304 mm or 457mm)
Y Axis	7"	(178 mm)
Z Axis	9.5"	(241 mm)
Work Area		
Table Size	19.5" x 6.25"	(495 mm x 159 mm)
Table Load Cap.	150 lbs.	(68 kg)
Threaded matrix	3/8" - 16, 1" on center	
Open Height	12"	(304 mm)
Throat clearance	6.75"	(171 mm)
Spindle		
Motor	2 hp high-frequency	
Speed	12,000-45,000 rpm	
Axis Drive Motors		
Motor	DC Servo	
Feed rate	0.1-200ipm	(2-5080 mm/min)
Torque	42 oz. in.	(30 Ncm)
Accuracy		
Positioning	+/- 0.0002"	(0.00508 mm)
Repeatability	0.0001"	(0.00254 mm)
Resolution	0.00002"	(0.000508 mm)
Each machine is calibrated and verified with a laser interferometer at factory. Operating temperature is 72° F (22° C). Accuracy is dependent on temperature and other operating variables.		
Dimensions		
Width	34 - 48"	(864 - 1219 mm)
Height	56.5"	(914 mm)
Depth	48"	(1219 mm)
Weight	400 lbs	(181 kg)
Shipping Weight	500 - 1000 lbs	(227 - 434 kg)
Accessories wt	11 lbs	(5 kg)

Control Specifications

Programming
EIA RS274-D standard G & M codes
Fanuc® compatible
CAD/CAM compatible
Incremental or absolute programming
Pause, dwell, chain and repeat functions
Programmed feed rate control
Clockwise and counter-clockwise spindle direction
Align/homing command
Tool length offsets for 199 tools
Multiple programs possible w/chaining command
Multiple coordinate systems
Rigid tapping
Interpolation
Rapid, linear, circular and helical interpolation
Circular interpolation with center point or radius input
Contouring 4th axis interface, optional
Operation
Manual cycle start and stop
Manual program pause and feedhold
Manual override spindle speed, 50-150%
Manual override feed rate, up to 200%
Computer-controlled jog, go to and traverse motion
Single block and continuous run operational mode
Optional skip and stop
Interface
32-bit DSP motion control card
Control Area Network (CAN bus) link
Full control & editing via keyboard or mouse
On screen help & error messages
Instantaneous position readout of X, Y, Z, & A axes
Real-time or simulated tool path verification
3-D solid or centerline tool path verification view
Spindle load monitor



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