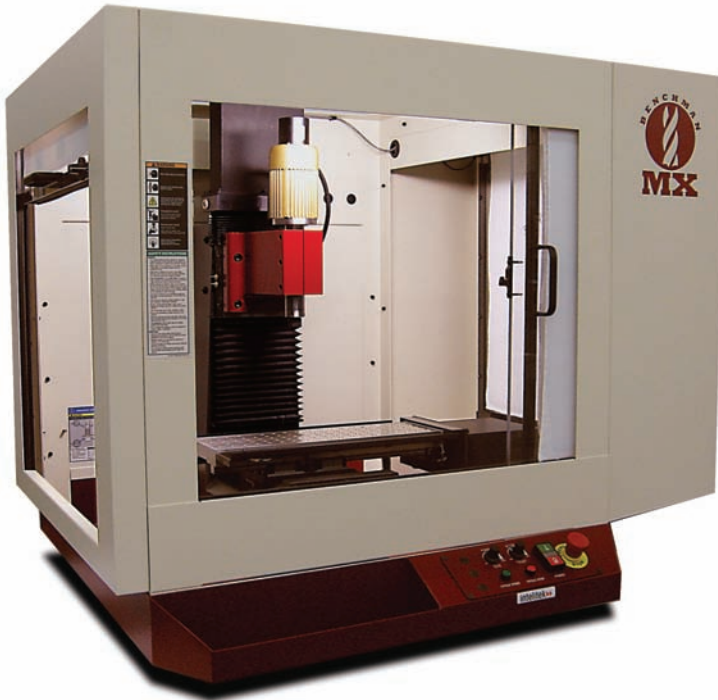
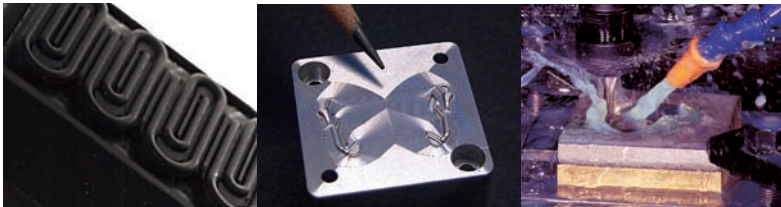


# Benchman MX

## CNC Machining Center



**Benchman MX CNC Mill**



With 25 years of experience and more than 13,000 CNC machines installed worldwide, intelitek has earned its reputation as a leader in factory automation solutions.

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

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

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

No more, no less.

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

You never pay for capabilities you don't need.

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

**Powerful.**

**Precise.**

**Scalable.**

**Affordable.**

If you're looking for the perfect tool for your application, consider the **Benchman MX**. It's what you make it.

**intelitek**  <sup>®</sup>  
[www.intelitek.com](http://www.intelitek.com)



# Benchman MX



Open machine with safety shield



**CNCBase:**  
A CNC software package for effortless programming, operation and control

## Configuration Options:

Spindle		
1 HP:	5,000 rpm	<input type="radio"/>
	10,000 rpm	<input type="radio"/>
0.8 HP	50,000 rpm High Freq.	<input type="radio"/>
2.66 HP	45,000 rpm High Freq.	<input type="radio"/>
Tooling		
Manual		<input type="radio"/>
Quick-change		<input type="radio"/>
Automatic Tool Changers		
45k spindle	5-position table-mounted	<input type="radio"/>
	12-position carousel (requires enclosure)	<input type="radio"/>
50k spindle	5-position table-mounted	<input type="radio"/>
Enclosure		
Open machine with safety shield		<input type="radio"/>
Standard enclosure		<input type="radio"/>
Graphite enclosure		<input type="radio"/>
Coolant enclosure		<input type="radio"/>
Machinists light for enclosure		<input type="radio"/>
Additional options		
18" extended X-axis cross slide		<input type="radio"/>
Simultaneous 4th axis control		<input type="radio"/>
Micro-mist coolant		<input type="radio"/>
Tool length offset probe		<input type="radio"/>
Digitizing (reverse engineering)		<input type="radio"/>
Benchman tooling supplies		<input type="radio"/>
CAN bus I/O modules		<input type="radio"/>
Air vise		<input type="radio"/>

Contact intelitek for pricing.

## Features:

Granite co-polymer one-piece base and column
Precision-ground cast iron table
Linear ball bearing guideways
Laser calibrated for optimum accuracy
1 HP 5,000 rpm spindle standard
Zero-backlash ballscrews
Covers on slideways and ballscrews
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 DSP motion control card
Safety Features
CE certified for safety compliance
Safety shield with interlock switch
Emergency stop switch on front panel
End of travel stops on each axis
Low air pressure sensor
Requirements
<b>Computer System (Computer not included)</b>
Pentium IV 2 GHz, Windows XP Pro, 256MB of RAM, 20MB available HD space, CD-ROM drive, serial port, full-length PCI slot, VGA display, 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 457 mm)
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:		
HP	Speed (rpm)	Tooling
1 HP	0 - 5,000	R-8
1 HP	0 - 10,000	R-8
2.66 HP	12,000 - 45,000	ISO-10
0.8 HP	10,000-50,000	1/8" straight shank
Axis Drive Motors		
Motor	DC Servo	
Feed rate	0.1-200 ipm	(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	500 - 1000 lbs	(227 - 434 kg)
• Accessories	11 lbs	(5 kg)

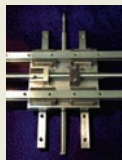
## Control Specifications

Programming	
EIA RS274-D standard G & M code compatible	
Fanuc® compatible	
CAD/CAM compatible	
Absolute or incremental programming	
Advanced NC code editing	
Pause, dwell, chain and repeat functions	
Clockwise and counter-clockwise spindle direction	
Canned cycles for drilling and boring	
Tool length offsets for 199 tools	
Programmable tool offsets and cutter compensation	
English and metric units	
Unlimited open programs and program blocks	
Multiple coordinate systems	
Macro programming	
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	
Controller	
32-bit DSP motion control card	
Control area network (CAN bus) link	
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	

## Features and Options



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