

BenchTurn 7000 CNC Turning Center

The BenchTurn 7000 is a benchtop CNC turning machine for learning environments. The 7000 comes equipped with 2-axis stepper motors, ball screws, a variable speed brushless spindle motor, limit/home switches, and an MT3 taper spindle with MT2 taper tailstock. This system requires no assembly, arriving at your facility ready to run on an Ethernet port on a standard PC, and fits comfortably into any classroom without sacrificing features. Like larger industrial machines, the BenchTurn 7000 uses EIA, ISO, and FANUC™-compatible G&M code programs to cut parts in a variety of materials.



Standard Features

- Ethernet-based control
- Brushless spindle motor
- Full enclosure with automatic safety door lock
- Tailstock
- Automatic diagnostics and power cut off protection
- PC-based CNC software
- Coolant-ready
- Jog pendant-ready
- Robotic integration-ready with 6 inputs, 6 outputs
- No assembly required

Included Accessories

- 4" 3-jaw chuck with key
- 4-station automatic tool turret
- One shot lubrication system
- Internal work light

Accessory kit includes:

- (1) Chuck key
- (1) Chuck jaw set
- (2) Dead centers
- (1) 4-pc. Allen wrench set
- (1) 2-pc. Open-end wrench set
- (1) 2M Ethernet cable
- (1) Storage box
- Misc. accessories

Specifications

Axis Travel

X Axis, max	75 mm	2.96"
Z Axis	250 mm	9.84"

Work Area

Swing over bed	200 mm	7.87"
Swing over cross slide	100 mm	3.94"
Max dist. between centers	360 mm	14.17"
Bed width	100 mm	3.94"

Spindle

Motor Type	Brushless	
Motor power	500 W / 0.67 HP	
Spindle speed	100-3000 RPM	
Spindle taper	MT3	

Tooling

Automatic tool position	4	
Tool post angle	360 deg.	
Tailstock taper	MT2	
Tailstock travel	50 mm	1.97"

Accuracy

Position accuracy	0.015 mm	0.0006"
Repeatability	0.010 mm	0.0004"

Dimensions

Machine size

Width	1093 mm	43.00"
Depth	864 mm	34.00"
Height	565 mm	22.25"

Shipping size

Width	1435 mm	56.50"
Depth	1020 mm	40.15"
Height	960 mm	37.75"

Weight (approximate)

Machine weight	170 Kg	353 lbs
Shipping weight	220 Kg	485 lbs

Axis Drive Motors

Axis motor type	Stepper	
X axis	1.35 N-m	192 oz-in
Z axis	1.35 N-m	192 oz-in
Rapid feed rate	2000 mm/min	79 ipm
Feed rate	500 mm/min	20 ipm

Air Supply*

*Only required for optional pneumatic accessories:
620 kPa (90 psi)
1/4" NPT female connection provided

Control Software

EIA RS274-D standard G & M code compatible
FANUC® compatible
CAD/CAM compatible
Advanced NC code editing
Real-time or simulated graphic tool path verification

Computer System Requirements

Intel / AMD Single Core 1.6GHz
512MB RAM
300MB Available Disk Space
Windows XP SP3 / Vista / 7 - 32 or 64bit
1 available LAN port*

*Additional LAN port required if your computer requires wired network access

Power Requirements

United States

115 VAC (+5%/-10%) 60 Hz, 20A

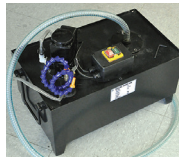
International

230 VAC (+5%/-10%) 50 Hz, 8A

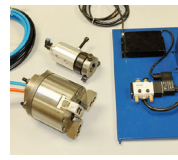
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Options and Accessories

Coolant System



Air Chuck for BenchTurn 7000



TiN-coated Cutter, 7-pc set, 10mm x 10mm



Jog Pendant Handwheel



MT2 Tailstock Chuck



4-Jaw Chuck with Flange (3.9")



3-drawer mobile workbench 60"



Rolling Center, Tailstock MT2



Ordering Information

Hardware

BenchTurn 7000 - 110 VAC	00-5504-0110
BenchTurn 7000 - 220 VAC	00-5504-0220
Starter Bundle, 110/220 VAC, Imp/Met	CNC-7000-STRT
Includes:	
■ CNC BenchTurn 7000	
■ 10 x 10mm Cutter Tool Holder	
■ TiN-coated Tip	
■ Drill Chuck for Tailstock	
■ Rolling Center	
■ LM7 Content, Vir, CNC Turning w/BenchTurn 7000	

Advanced Bundle, 110/220 VAC, Imp/Met **CNC-7000-ADV**

Includes all Starter Bundle items, plus:

- 4-jaw Chuck
- Handwheel - Manual Control
- Coolant System

Software

CNCMotion® Simulation Software	63-6789-1000
FANUC™ 21i Emulator	63-6789-2000-FA
SpectraCAM Turning	10-6743-0000

Curriculum

CNC Turning with BenchTurn 7000, LearnMate course, Lab	
Imperial	77-8141-0001
Metric	77-8141-0002
CNC Turning with BenchTurn 7000, LearnMate course, Virtual	
Imperial	77-3141-0001
Metric	77-3141-0002

Accessories

4-Jaw Chuck with 3.9" (100mm) Flange	10-1106-7000
Pneumatic Air Chuck	10-1110-9000
TiN-coated Cutter w/Inserts, 10 mm, 7-Pc Set	10-1110-1000
Cutter Insert Replacements 7-pc Set,	10-1110-2000
Pneumatic Shield Opener with Sensors	10-1110-5000
Tailstock Chuck MT2 Taper 1/2" (13mm)	10-1105-7000
Rolling Center, Tailstock MT2 Taper	10-1106-6000
Basic Air Compressor and Conditioning System	10-4526-0000
Quiet Operation Air Compressor / Cond. System	10-4527-0000
Jog Pendant Handwheel	10-1111-1000
Coolant System - 110 VAC	10-1108-1110
Coolant System - 220 VAC	10-1108-1220
Mobile Workbench 6Ft, Desk Style, Wood Top	10-5594-0000
Mobile Workbench with Storage Cabinet, 60"	10-5590-0000
Mobile Workbench with 3-Drawer Cabinet, 60"	10-5591-0000
Mobile Workbench with 3-Drawer Cabinet, 96"	10-5592-0000
Project Kit, Brass Cannon	10-9307-0000
Project Kit, Sterling Engine	10-9603-0000
Project Kit, Chess Set	10-7551-0000

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