

FTC – Flat Bed Turning Center Combination Lathe Pricing

Effective September 1, 2008 Rev. A



MACHINE MODEL		FTC35	FTC40
Flat Bed Design with Gear Box and Auto-Shift Transmission			
Swing Over Bed		36.25" 920 mm	39.7" 1010 mm
Spindle Horsepower FANUC 1 minute / 30 minutes		51/35 38/26 kw	51/35 38/26 kw
BED LENGTHS – SELECT STANDARD OR OPTIONAL AS AN ACCESSORY			
Bed Length	80" 2 m		
	120" 3 m		
	160" 4 m		
	200" 5 m		
	240" 6 m		
SPINDLE BORES – SELECT STANDARD OR OPTIONAL AS AN ACCESSORY			
Spindle Bore	4.17" 106 mm		
	6.02" 153 mm		
	10" 254 mm		
	14" 355 mm		
MACHINE FEATURES			
<ul style="list-style-type: none"> • Two Year Parts Warranty • Fully Ground Solid Ways with Turcite Surfaces • Precision Ground Ball Screws • Automatic Metered Lubrication with Low Lube Fault • Flood Coolant Pump with Nozzle • Gap Bed Design – Contact Factory for Information • All Axes Laser Calibrated and Ballbar Inspected • High Torque AC Digital Servo Drives • High Torque Closed Loop Vector Spindle Drive System • Automatic Shifting Spindle with High Torque Gear Box • Turning, Facing, Grooving, Tapping and Boring Cycles • End of Cycle Light • Ball Screw Error Compensation • Chuck Guard with Safety Switch • Heavy Duty Metal Enclosure with Sliding Front Door • Chip Drawer Containment System (Optional Conveyor) • Door Interlock Safety Switch • LCD Hour Meter • Tail Stock with Safety Switch 			
GE FANUC 0i-TC CONTROL FEATURES			
<ul style="list-style-type: none"> • ManualGuide™ Conversational programming system • Dynamic graphic display • 256 Kb program storage • Macro executor • Scaling, rotation & mirror imaging • 10.4" color LCD Display • PCMCIA slot • Electronic handwheel • 8ms block processing speed (4ms with AICC option) • Manuals on CD ROM (bound manuals are optional) • RS232 port with DNC capability • Ethernet port 			
GE FANUC CONTROL OPTIONS			
Data Server with 256 MB Parts Storage			
AICC – 4ms Block Processing			
Remote Electronic Handwheel			
WORK HOLDING			
12" 300mm Manual 3 Jaw Chuck, Mounted – 4.95" Bore A1-11 Adaptor Plate			
16" 400mm Manual 3 Jaw Chuck, Mounted – 5.35" Bore A2-11 Adaptor Plate			
20" 500mm Manual 3 Jaw Chuck, Mounted – 7.48" Bore A2-11 Adaptor Plate			
25" 635mm Manual 3 Jaw Chuck, Mounted – 9.92" Bore A2-11 Adaptor Plate			
20" 500mm Manual 3 Jaw Chuck Mounted – 7.48" Bore A2-11 Direct Mount			
25" 635mm Manual 3 Jaw Chuck Mounted – 10.75" Bore A2-15 Direct Mount			
16" 400mm Independent 4 Jaw Chuck Mounted – 6.5" Bore A2-11 Direct Mount			
20" 500mm Independent 4 Jaw Chuck Mounted – 6.5" Bore A2-11 Direct Mount			
24" 610mm Independent 4 Jaw Chuck Mounted – 10.5" Bore A2-15 Direct Mount			
Other Manual Chucks			
15" 380mm 3 Jaw Hydraulic Chuck – 3.75" Bar Capacity A1-11 Mount <i>Used on 4" bore machines</i>			
15" 380mm 3 Jaw Hydraulic Chuck – 4.625" Bar Capacity A2-11 Mount <i>Used on 6" bore machines</i>			
24" 600mm, 3 Jaw Hydraulic Chuck – 3.75" Bar Capacity A1-11 Mount <i>Used on 4" bore machines</i>			
24" 600mm 3 Jaw Hydraulic Chuck – 4.625" Bar Capacity A2-11 Mount <i>Used on 6" bore machines</i>			
Steady Rest, Roller Type 1.9"-11.8" 50 -300 mm			
Follow Rest, Brass Tips 1.1" - 7.8" 30 - 200 mm			

WORK HOLDING CONTINUED				
Rear Mounted Chuck Flange	4" 106 mm Bore		6" 153 mm Bore	
Price does not include spindle nose	10" 254 mm Bore		14" 355 mm Bore	
TOOLING				
Tooling Riser Block (No Tooling) – Specify Tooling Type or Height Will require machining on site				
Super Dorian Tool Post & Riser Block, 1.5" 40 mm No tool holders included				
Automatic 1" 25mm 8 Station Turret (must specify metric) Includes 1 Boring Bar Holder & 1 Axial Holder(Can be mounted in front or rear – specify) BTP-80 Turret Body				
Automatic 1" 25mm 12 Station Turret (must specify metric) Includes 1 Boring Bar Holder & 1 Axial Holder(Can mount in front or rear - specify) BTP-100 Turret Body				
Automatic 1 ½" 38mm 8 Station Turret (must specify metric) Includes 1 Boring Bar Holder & 1 Axial Holder(Can mount in front or rear - specify) BTP-125 Turret Body				
Automatic 1 ½" 38mm 8 Station Turret (must specify metric) Includes 1 Boring Bar Holder & 1 Axial Holder(Can mount in front or rear - specify) BTP-160 Turret Body				
Metric 25, 32 or 38 mm Turret Face to Replace 1", 1.25" and 1. 5" Turret Face				
1.5" Boring Bar Holder For 1" 25 mm Turret				
2" Boring Bar Holder For 1.25" & 1.5" 32 & 38 mm Turret				
2.5" Boring Bar Holder For 1.5" 38mm BTP-160 Turret				
1" 25mm Axial Tool Holder For 1" 25 mm Turret				
1.5" 38 mm Axial Tool Holder For 1.5" 38 mm Turret				
1.5" 38 mm Axial Tool Holder For 1.5" 38 mm BTP-160 Turret				
Optional Roller Steady Rest: 9.8" – 17.7" 250 mm - 450 mm (FTC35 Only)				
Optional Roller Steady Rest: 9.8" – 19.6" 250 mm - 500 mm (FTC40 Only)				
VDI Upgrade for Turrets No tool holders				
LIVE TOOLING – Contact Distributor for Application				
Spindle Orient (Required with Live Tooling)				
Baruffaldi TBMA Live Tooling, Servo Turret, 8 Station, S6, 10 minute Live Tooling Duty Cycle Rating (Rear Mounted) No tooling supplied with Live Tool Turret, Fixed or Rotating			VDI 50, 12 HP – Model 250	
Spindle Brake and Upgraded Spindle Motor (Required with Live Tooling)				
Standard Axial Holder VDI 50				
Standard Radial Holder VDI 50				
OTHER ACCESSORIES				
Single Spare "M" Function and CNC "Wait" Channel				
Spare "M" Functions – Block of 4 Maximum 2 blocks; price is for each block				
Chip Conveyor	80"		120"	200"
			160"	240"
Chip Bucket for Chip Conveyor				
RS-232 Cable, 50' 15 Meters				
Additional Programming Manual				
Programming Manual in Electronic Format on CD				
Additional Machine Manual				
Fanuc Power Requirements 208-240 VAC, 50 – 60 hz, 3Ø				
380-480 Transformer (Reduces Voltage to 208-240) 40 kVA Factory recommended sizes. Consult local electrical codes for proper transformer sizing				
UL/CUL Compliance				
CE Code Required for European Union Countries				
International Packaging				
Two Year Parts Warranty ^{See Note}				
On Site Factory Installation, U.S. only Does not include airfare – Training available through Fanuc				
<p><i>Terms within USA: Cash or terms with approved credit; down payment due with order. Terms outside USA: Cash or approved Letter of Credit. F.O.B Waconia, MN USA.</i></p> <p><i>Prices do not include taxes, duties, transportation, rigging or start-up.</i></p> <p><i>Milltronics reserves the right to amend or change without notice without incurring obligation; not responsible for typographical errors.</i></p> <p><i>Consult Written Warranty Statement for Details of Two Year Parts Warranty.</i></p>				

FTC –Large Swing Combination Lathe Specifications

Effective September 1, 2008



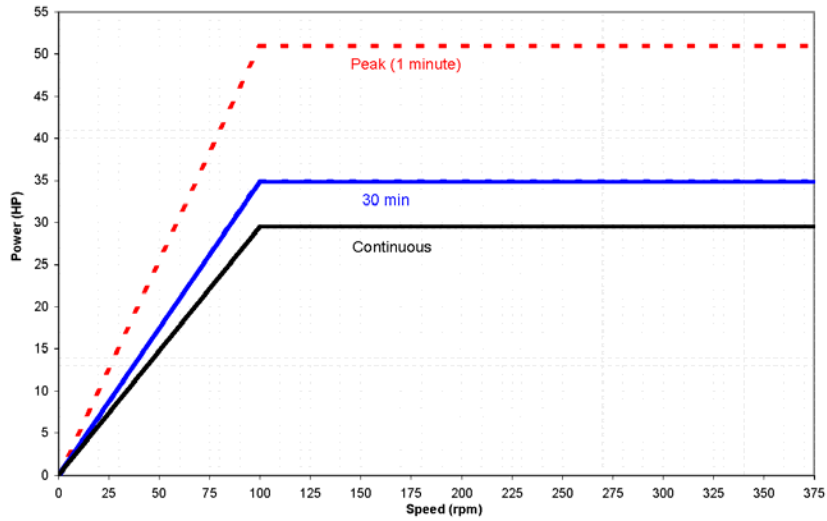
MACHINE MODEL	FTC35	FTC40
Control Type	GE Fanuc OiTC	
CAPACITY		
Swing Over Bed	36.2" <i>920 mm</i>	39.7" <i>1010 mm</i>
Swing Over Gap	45" <i>1150 mm</i> (dia.)	50" <i>1280 mm</i> (dia.)
Contact factory for limitations	14.6" <i>372 mm</i> Gap	14.6" <i>372 mm</i> Gap
Swing Over Cross Slide	21.6" <i>550 mm</i>	26.6" <i>676 mm</i>
Cross Slide Tool Holder Mounting Surface	T-Slots	T-Slots
Cross Slide "T" Slots	18 mm	18 mm
Travel (X Axis) Cross Slide	19" <i>480 mm</i>	21" <i>550 mm</i>
Travel (Z Axis) with tailstock 80" Bed	87" <i>2210 mm</i>	87" <i>2210 mm</i>
Travel (Z Axis) with tailstock 120" Bed	120" <i>3000 mm</i>	120" <i>3000 mm</i>
Travel (Z Axis) with tailstock 160" Bed	160" <i>4000 mm</i>	160" <i>4000 mm</i>
Travel (Z Axis) with tailstock 200" Bed	200" <i>5000 mm</i>	200" <i>5000 mm</i>
Travel (Z Axis) with tailstock 240" Bed	240" <i>6000 mm</i>	240" <i>6000 mm</i>
Z Cutting Length with Turret	Consult factory	Consult factory
Center Distance 80" Bed	86" <i>2200 mm</i>	80" <i>2000 mm</i>
Center Distance 120" Bed	126" <i>3200 mm</i>	120" <i>3000 mm</i>
Center Distance 160" Bed	165" <i>4200 mm</i>	160" <i>4000 mm</i>
Center Distance 200" Bed	205" <i>5200 mm</i>	200" <i>5000 mm</i>
Center Distance 240" Bed	244" <i>6200 mm</i>	240" <i>6000 mm</i>
Bed Width	22" <i>560 mm</i>	22" <i>560 mm</i>
Machine Weight 80" Bed	23,000 lb <i>10500 kg</i>	24,500 lb <i>11,000 kg</i>
Add 2200 lbs <i>1000 kg</i> for each 40" of extended bed length		
Ball Screw Size – 80" Bed Length	X 40 mm Z 63 mm	X 40 mm Z 63 mm
Ball Screw Size – 160" - 240" Bed Length	X 40 mm Z 80 mm	X 40 mm Z 80 mm
Ball Screw Grade	C5 Precision Ground	C5 Precision Ground
Ball Screw Pitch X axis / Z axis	5 mm / 12 mm	5 mm / 10 mm
Maximum Weight of Part With Chuck and Supported From Center	6600 lb <i>3000 kg</i>	8800 lb <i>4000 kg</i>
SPINDLE		
Spindle Drive System	Two Speed Auto Shift Geared Transmission with Closed Loop Digital Vector Drive System	
Standard Horsepower FANUC 1 minute / 30 minutes	51/35 HP <i>38/26 kw</i>	
Reference Torque Chart:	51/35/2/GL/F and 51/35/2/GH/F	
Spindle Programmable Resolution – with Orient Option	0.01 °	0.01 °
Spindle Orient Positioning Accuracy – with Orient Option	± 0.16 °	± 0.16 °
Spindle Speed 4" Spindle Bore <i>*Important notice: RPM may be limited due to chuck size and workpiece</i>	10 - 1480	10 - 1480
Spindle Range 1 – 4" Spindle Bore	10 - 375	10 - 375
Spindle Range 2 – 4" Spindle Bore	10 - 1440	10 - 1440
Spindle Speed 6" Spindle Bore <i>*See note above</i>	10 - 1440	10 - 1440
Spindle Range 1 – 6" Spindle Bore	10 - 375	10 - 375
Spindle Range 2 – 6" Spindle Bore	10 - 1440	10 - 1440
Spindle Speed 10" Spindle Bore <i>*See note above</i>	10 - 750	10 - 750
Spindle Range 1 – 10" Spindle Bore	10 - 375	10 - 375
Spindle Range 2 – 10" Spindle Bore	10 - 750	10 - 750
Spindle Speed 14" Spindle Bore <i>*See note above</i>	10 - 500	10 - 500
Spindle Range 1 – 14" Spindle Bore	10 - 375	10 - 375
Spindle Range 2 – 14" Spindle Bore	10 - 500	10 - 500
Standard Spindle Bore	4.17" <i>106 mm</i>	4.17" <i>106 mm</i>
Optional Spindle Bore	6.02" <i>153 mm</i>	6.02" <i>153 mm</i>
Optional Spindle Bore	10" <i>254 mm</i>	10" <i>254 mm</i>
Optional Spindle Bore	14" <i>355 mm</i>	14" <i>355 mm</i>
Spindle Nose Type – Standard Bore 4" <i>106 mm</i>	A1-11	A1-11
Spindle Nose Type – Optional Bore 6" <i>153 mm</i>	A2-11	A2-11
Spindle Nose Type – Optional Bore 10" <i>254 mm</i>	A2-15	A2-15
Spindle Nose Type – Optional Bore 14" <i>355 mm</i>	A2-20	A2-20
Tailstock Quill Travel	8" <i>200 mm</i>	9" <i>230 mm</i>

MACHINE MODEL	FTC35	FTC40
Tailstock Quill Diameter	4.92" <i>125 mm</i>	4.92" <i>125 mm</i>
Tailstock Quill Taper	MT6	MT6
TOOLING ACCESSORIES – Contact factory for live tooling Specifications		
Super Dorian Tool Post Option	SD60EA 1.5" <i>40 mm</i>	SD60EA 1.5" <i>40 mm</i>
8 Station Auto Turret Option – 1" <i>Specify if metric is desired</i>	1" x 5" <i>25 x 125 mm</i>	1" x 5" <i>25 x 125 mm</i>
12 Station Auto Turret Option – 1" <i>Specify if metric is desired</i>	1" x 5.5" <i>25 x 140 mm</i>	1" x 5.5" <i>25 x 140 mm</i>
12 Station Auto Turret Option – 1 ¼" <i>Specify if Metric is desired</i>	1.25" x 6" <i>32 x 150 mm</i>	1.25" x 6" <i>32 x 150 mm</i>
8 Station Auto Turret Option – 1 ½" <i>Specify if metric is desired</i>	1.5" x 6" <i>38 x 150 mm</i>	1.5" x 6" <i>38 x 150 mm</i>
Turret Boring Bar Capacity – 1" Turret	1.5" <i>40 mm</i>	1.5" <i>40 mm</i>
Turret Boring Bar Capacity – 1 ¼" & 1 ½" Turret	2" <i>50 mm</i>	2" <i>50 mm</i>
Turret Boring Bar Sleeve – 1" Turret	1.5" dia x 3" <i>40 mm x 76 mm</i>	1.5" dia x 3" <i>40 mm x 76 mm</i>
Turret Boring Bar Sleeve – 1 ½" & 1 ¼" Turret	2" x 3.5" <i>50x88mm</i>	2" x 3.5" <i>50x88mm</i>
Turret Boring Bar Sleeve – BTP-160 Turret	2.5" x 4.875" <i>60 x 124 mm</i>	2.5" x 4.875" <i>60 x 124 mm</i>
Steady Rest <i>Roller Type</i>	1.9 - 11.8" <i>50 - 300 mm</i>	1.9 - 11.8" <i>50 - 300 mm</i>
Optional Steady Rest <i>Roller Type</i>	9.8 - 17.7" <i>250 - 450 mm</i>	9.8 - 19.6" <i>250 - 500 mm</i>
Follow Rest <i>Brass Tip</i>	1.1 - 7.8" <i>30 - 200 mm</i>	1.1 - 7.8" <i>30 - 200 mm</i>
PERFORMANCE		
Servo Type	AC	AC
Rapid Traverse XZ	500 ipm <i>12.7 mpm</i>	500 ipm <i>12.7 mpm</i>
Maximum Feedrate	100 ipm <i>2540 mm/m</i>	100 ipm <i>2540 mm/m</i>
Position Accuracy <i>See note</i>	± .00025" <i>0.0063 mm</i>	± .00025" <i>0.0063 mm</i>
Repeatability <i>See note</i>	0.00039" <i>0.010 mm</i>	0.00039" <i>0.010 mm</i>
Resolution	0.00004" <i>0.001 mm</i>	0.00004" <i>0.001 mm</i>
Thrust, Machine Duty Rating	X: 6700 lb <i>3000 kg</i> Z: 6700 lb <i>3000 kg</i>	X: 6700 lb <i>3000 kg</i> Z: 6700 lb <i>3000 kg</i>
Live Tooling Spindle Programmable Resolution	1/2°	1/2°
Live Tooling Spindle Positioning Accuracy	0.088°	0.088°
MISCELLANEOUS		
Flood Coolant Capacity – 80" Bed	90 gal <i>340 L</i>	90 gal <i>340 L</i>
Flood Coolant Capacity – 120" Bed	85 gal <i>320 L</i>	85 gal <i>320 L</i>
Flood Coolant Capacity – 160" Bed	110 gal <i>420 L</i>	110 gal <i>420 L</i>
Flood Coolant Capacity – 200" Bed	140 gal <i>530 L</i>	140 gal <i>530 L</i>
Flood Coolant Capacity – 240" Bed	150 gal <i>564 L</i>	150 gal <i>564 L</i>
Way Surface	Hardened and Ground Square Box Turcite Ways	
Fanuc Power Requirements 208-240 VAC, 50 – 60 hz, 3Ø	100 amps 38 KVA	100 amps 38 KVA
Warranty	Parts: Two years or 4200 hours, whichever occurs first on all normal failures. Service: One year or 2100 hours (whichever occurs first) from distributor.	
<p><i>Measurements performed with Renishaw laser and ballbar systems. Measurements are linear over entire travel, and temperature changes and table loads may affect tolerances. Tolerances are guaranteed over 10" sq. area.</i></p> <p><i>For machine duty rating, see "Truth in Specifications" on www.milltronics.net.</i></p> <p><i>Milltronics reserves the right to change specifications at any time without incurring obligation.</i></p>		

Fanuc Torque Chart 51/35/2/GL/F – Geared Spindle – Low Range

Used on: Standard FTC35, FTC40
Optional N/A

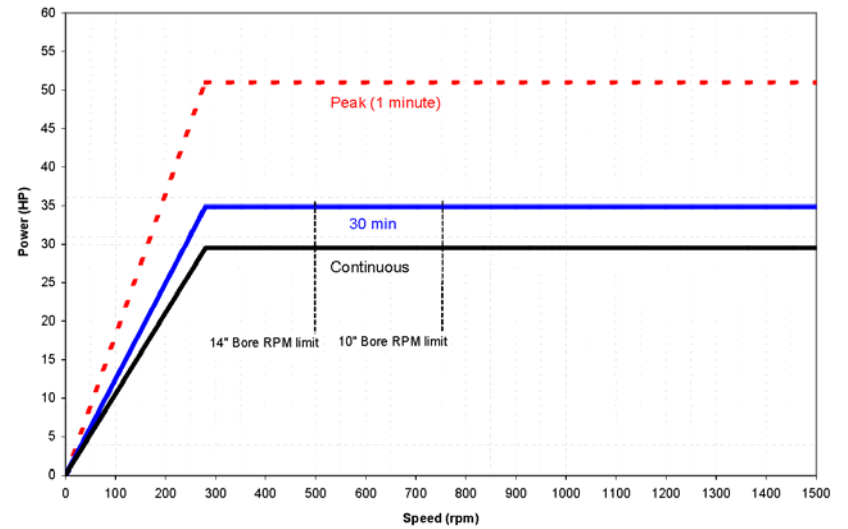
Fanuc a 22/7000/ Motor Power Characteristics of ML35-40 with 51/35 hp Spindle (LOW gear)



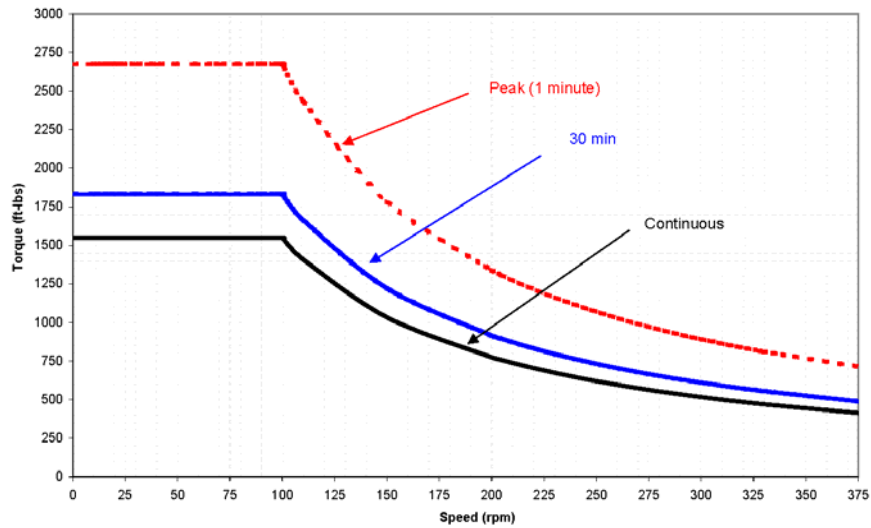
Fanuc Torque Chart 51/35/2/GH/F – Geared Spindle – High Range

Used on: Standard FTC35, FTC40
Optional N/A

Fanuc a 22/7000/ Motor Power Characteristics of ML35-40 with 51/35 hp Spindle (HIGH gear)



Fanuc a 22/7000/ Motor Torque Characteristics of ML35-40 with 51/35 hp Spindle (LOW gear)



Fanuc a 22/7000/ Motor Torque Characteristics of ML35-40 with 51/35 hp Spindle (HIGH gear)

