

Tornado T2, T4, T8 & T10 2 Axis Turning

The Tornado T2, T4, T8 and T10 2 Axis CNC Lathes are precision turning machines with the state-of-the-art G.E. Fanuc 21i TB control, available in Chucking, Bar Feed and 'Lights-Out' Models with the versatility that can handle your most demanding turning needs



TO

- Powerful G.E. Fanuc spindle drive gives acceleration time of 2 sec. to top speed
- New generation G.E. Fanuc 'B' Series 21i TB CNC control system with 'Manual Guide i' has twice the processing speed as the 'A' series
- Twelve station high speed turret
- Quick changeover and set-up with VDI tooling
- High performance slideway and carriageway assemblies
- One of the smallest footprint of any machine in its range
- High quality hydraulic chucking system
- Massive cast iron 60° bed with precision ground surfaces is mounted on an extra heavy-duty unstressed, fabricated Duo-stable™ engineered base, designed for strength, vibration absorption and thermal and mechanical stability. As a result, the Tornado is over 20 percent heavier than comparable machines.
- Easy installation and set-up...The base design allows easy fork lift access and the three point floor mount allows quick set-up, no leveling required
- Optional CAM system software package, designed to run on virtually any PC

Specifications

	Tornado 2 Axis	T2	T4	T8	T10
Capacity					
Swing over bed cover		16.14"(410mm)	16.14"(410mm)	20.07"(510mm)	23.62"(600mm)
Max. turned diameter		6.69"(170mm)	9.05"(230mm)	10.23"(260mm)	14.17"(360mm)
X axis travel		6.69"(170mm)	7.87"(200mm)	9.25"(235mm)	10.63"(270mm)
Max. turning length		13.78"(350mm)	17.72"(450mm)	21.26"(540mm)	23.62"(600mm)
Spindle					
Spindle nose		A2-5	A2-5	A2-6	A2-8
Power chuck (type A/B)		5"/6.7"(125/170mm)	6.7"/8.26"(170/210mm)	8.26"/10"(210/254mm)	10"/12"(254/305mm)
Front bearing I/D		3.185"(80mm)	3.54"(90mm)	4.33"(110mm)	5.12"(130mm)
Spindle bore		2.13"(54mm)	2.40"(61mm)	3.05"(77.5mm)	3.56"(90.5mm)
Bar capacity		1.65"(42mm)	2.12"(54mm)	2.59"(66mm)	3.25"(82.5mm)
Max. spindle speed (A/B) (rpm)		6000/4000	6000/4000	5000/3500	4000/3000
Spindle motor (Cont./30 min.)		5/7.5 hp(4/5.5kW)	10/15 hp(7.5/11kW)	25/30 hp(18.5/22kW)	30/35 hp(22/26kW)
Spindle speed @ full Hp (A/B)		1500/1000 rpm	1500/1000 rpm	1250/875 rpm	597/448 rpm
Axes					
Rapid traverse X-axis		787 in/min(20mpm)	787 in/min(20mpm)	984 in/min(25mpm)	984 in/min(25mpm)
Rapid traverse Z-axis		984 in/min(25mpm)	984 in/min(25mpm)	1181 in/min(30mpm)	1181 in/min(30mpm)
X-axis thrust (continuous)		565 lbf(2.51kN)	565 lbf(2.51kN)	850 lbf(3.77kN)	850 lbf(3.77kN)
Z-axis thrust (continuous)		848 lbf(3.77kN)	848 lbf(3.77kN)	1,607 lbf(7.16kN)	1,607 lbf(7.16kN)
X-axis ballscrew		25x4 mm	25x4 mm	32x8 mm	32x5 mm
Z-axis ballscrew		32x10 mm	32x10 mm	40x10mm	40x10mm
X/Z-axis encoder feedback		rotary	rotary	rotary	rotary
Positioning accuracy		±0.0002(0.005mm)	±0.0002(0.005mm)	±0.0002(0.005mm)	±0.0002(0.005mm)
Repeatability		±0.0001(0.002mm)	±0.0001(0.002mm)	±0.0001(0.002mm)	±0.0001(0.002mm)
Construction					
Carriage inclination		60°	60°	60°	60°
Spindle center height		35.43"(900mm)	35.43"(900mm)	37.79"(960mm)	38.46"(977mm)
Cross slide width		8.27"(210mm)	8.27"(210mm)	10.35"(263mm)	10.35"(263mm)
Cross slide type		20mm roller guides	20mm roller guides	35mm roller guides	35mm roller guides
Width across cross guide ways		7.32"(186mm)	7.32"(186mm)	8.9"(226mm)	8.9"(226mm)
Z-axis type		25mm roller guides	25mm roller guides	35mm roller guides	35mm roller guides
Bed width - linear guide rails		11.81"(300mm)	11.81"(300mm)	15.35"(390mm)	15.35"(390mm)
Tool Turret					
Turret disc diameter		13.38"(340mm)	13.38"(340mm)	16.14"(410mm)	18.3"(470mm)
Tooling system		VDI 30	VDI 30	VDI 40	VDI 40
No. of turret tool stations		12 bi-directional	12 bi-directional	12 bi-directional	12 bi-directional
Index time		0.6 sec	0.6 sec	0.45 sec	0.45 sec
Tool shank size		3/4"x3/4" (20x20mm)	3/4"x3/4" (20x20mm)	1"x1"(25.4x25.4mm)	1"x1"(25.4x25.4mm)
Max. boring bar		1.25"(32mm)	1.25"(32mm)	1.57"(40mm)	1.57"(40mm)
Travel past center line		0.87"(22mm)	0.87"(22mm)	1.06"(27mm)	1.06"(27mm)
Coolant, Space & Weight					
Coolant tank capacity		26 gal.(100 liters)	26 gal.(100 liters)	40 gal.(150 liters)	40 gal.(150 liters)
Coolant pump delivery		6.6 gal/min(25liters)	6.6 gal/min(25liters)	6.6 gal/min(25liters)	6.6 gal/min(25liters)
Maximum power consumption		13kVA	20kVA	37kVA	37kVA
Dimensions: L x W		95"x52"(2413x1321mm)	95"x52"(2413x1321mm)	107"x62"(2718x1575mm)	113"x61"(2870x1550mm)
Approx. net weight		6,019 lbs.(2730kg)	6,173 lbs.(2800kg)	9,810 lbs.(4450kg)	10,030 lbs.(4550kg)
Optional Tailstock (retrofitable)					
Tailstock quill diameter		2.48"(63mm)	2.48"(63mm)	3.74"(95mm)	3.74"(95mm)
Tailstock quill taper		3MT	3MT	5MT	5MT
Tailstock quill stroke		4.13"(105mm)	4.13"(105mm)	4.92"(125mm)	4.92"(125mm)
Tailstock body travel		17.72"(450mm)	17.72"(450mm)	23.62"(600mm)	23.62"(600mm)
Max. tailstock quill thrust		1,131 lbf(5.03kN)	1,131 lbf(5.03kN)	1,768 lbf(7.86kN)	1,768 lbf(7.86kN)

Model No.	Chuck Type	rpm	Max Bar
T2A	5" Hyd	6000	1.65" (42mm)
T2B	6.7" Hyd	4000	1.65" (42mm)
T2AB Bar Feed	Collet	6000	1.65" (42mm)
T2BB Bar Feed	Collet	4000	1.65" (42mm)
T2AL Lights-Out	Collet	6000	1.65" (42mm)
T2BL Lights-Out	Collet	4000	1.65" (42mm)
T4A	6.7" Hyd	6000	2.04" (52mm)
T4B	8.26" Hyd	4000	2.04" (52mm)
T4AB Bar Feed	Collet	6000	2.12" (54mm)
T4BB Bar Feed	Collet	4000	2.12" (54mm)
T4AL Lights-Out	Collet	6000	2.12" (54mm)
T4BL Lights-Out	Collet	4000	2.12" (54mm)
T8A	8.26" Hyd	5000	2.59" (66mm)
T8B	10" Hyd	3500	2.59" (66mm)
T8AB Bar Feed	Collet	5000	2.59" (66mm)
T8BB Bar Feed	Collet	3500	2.59" (66mm)
T8AL Lights-Out	Collet	5000	2.59" (66mm)
T8BL Lights-Out	Collet	3500	2.59" (66mm)
T10A	10" Hyd	4000	3.25" (82.5mm)
T10B	12" Hyd	3000	3.25" (82.5mm)
T10AB Bar Feed	Collet	4000	3.25" (82.5mm)
T10BB Bar Feed	Collet	3000	3.25" (82.5mm)
T10AL Lights-Out	Collet	4000	3.25" (82.5mm)
T10BL Lights-Out	Collet	3000	3.25" (82.5mm)