

MICROSTAR



4-AXIS CONTROL PRECISION
COMPACT CNC TURNING CENTER

LD1

The LD1 is a new type of turning center integrated with Y-axis and 12 live tool station turret. It succeeds to L15T machine which has an excellent reputation for machining the parts of optics and automotives.

Head stock on X-axis slide and Turret on Z-axis slide are separately mounted on the bed to avoid vibrational interference.

Headstock

The headstock adopts a rigid built-in motor system which ensures stable, high precision turning performances in all range of the spindle speed. The spindle is suspended on high precision ball bearings to ensure minimum heat generation, low vibration and long life at high spindle speed. The headstock is kept cool by an oil chiller to maintain high thermal stability. The maximum spindle speed is 6000min^{-1} . The least command increment on C-axis enables as precise as 0.001 degree.

X,Z-axis slide

The X and Z-axis slideways are box way structure employing Turcite sheets with fine scraped finish. This configuration offers smooth slide movement, quick response and repeatability as well as high rigidity. The rapid feed rate on X,Z-axis is 20m/min for high speed turning performance combined with sub-micron CNC control.

Turret tool post

The compact rigid 12 station turret is rotated by servo motor for non-lift quick index. A single position live tool is driven during operation.

MICROSTAR LD1

■ MACHINE STANDARD SPECIFICATIONS

Specifications		Unit	LD1	
Capacity	Max.turnadle O.D.	mm(in)	100(3.937)	
	Max.turnadle length	mm(in)	100(3.937)	
	Max.chuck size	in	6	
	Max.bar capacity	mm(in)	36(1.147)	
Spindle	Nose configuration		ϕ87(ϕ3.425)flat	
	Through hole dia	mm(in)	48(1.889)	
	Bearing I.D.	mm(in)	90(3.543)	
	Max.speed	min ⁻¹ (rpm)	6,000	
	Motor(30min/cont)	kw(HP)	Built-in spindle 7.5/5.5(10/7.3)	
Tool post	No.of turret-indexing position		12	
	Turret-indexing time	sec	1.0	
	Turret-indexing motor		AC servo motor	
	Turning holder for O.D.	mm(in)	20(0.787)	
	Boring bar holder for I.D.	mm(in)	20(0.787)	
	Drive-tool		12	
	Drive-tool speed	min ⁻¹ (rpm)	10,000	
	Drive-tool motor	kw(HP)	2.2/1.5(3.0/2.0)	
	Driven-tool collet	mm(in)	REGO-ER20(Max 13mm)	
Slide	Travel	mm(in)	X-axis	195(7.677)
		mm(in)	Y-axis	±40(1.574)
		mm(in)	Z-axis	250(9.842)
	Rapid	mm/min(IPM)	X-axis	20,000(787.4)
		mm/min(IPM)	Y-axis	10,000(393.7)
		mm/min(IPM)	Z-axis	20,000(787.4)
		min ⁻¹ (rpm)	C-axis	100
	Servomotor	kw(HP)	X-axis	2.7(3.6)
		kw(HP)	Y-axis	2.5(3.3)
		kw(HP)	Z-axis	2.5(3.3)
Other	Hydraulic unit	kw(HP)	1.5(2)	
	Coolant pump	kw(HP)	0.4/0.6(0.5/0.8)	
	Height	mm(in)	1,550(61.02)	
	Floor space(W×D)	mm(in)	1,800(70.86)×1,872(73.7)	
	Weight	kg(lb)	3,400(7,497)	

■CNC UNIT STANNDAR SPECIFICATIONS

Specifications		Unit	FANUC Series 0i-T
Control	Controlled axes & simultaneously controllable axes		4axes Simultaneously controllable axes 4axes
	Least movement increment	mm (in)	0.0001 (0.00001)
	Least input increment	mm (in)	0.0001 (0.00001)
Feed function	Feed rate override		0~150% (10%increments)
	Dwell		G04
	Reference point return		G28
Offset	Feed rate range (manual)		0~1,260mm/min (16steps)
	Rapid traverse override		12.5/25/50/100% (4steps)
	Feed per min./Feed per rev.		G98/G99
Programming	Tool & offset command		T4digits
	Tool offset amount memory		±7digits. 64pairs
	Tool geometry/wear compensation		Separate page of the offset
Memory	Measuring function		Offset amount direct input
	Tool nose radius compensation		G40,G41,G42
	Absolute/Increment		G90,G91
Other Function	Decimal point input		Input the number using decimal point
	Inch/metric conversion		Selected by parameter setting
	Radius designation on arc		R command
Memory	Sub program		Upto 4nesting
	Max.programmable dimensions		±9999.9999mm
	M function		2digit upto 3M codes available on same block
Other Function	Canned cycles		Turning/threading cycles
	Multiple repetitive cycle		G70~G79
	Chamfering/comer R		C & R command on the corner program
Memory	Rigid tapping		G84/G88
	Cylindrical interpolation		G07.1
	Polar coordinate interpolation		G12.1/G13.1
Memory	Input code		ISO/EIA automatic recognition
	Data input/output interface		Memory cord slot
	Part program storage & editing		1,280m
Other Function	Number of registerable programs		400
	Search function		Sequence/number search
	Background editing		Editing during the operation
Memory	MDI/CRT unit		8.4inch Color LCD
	Stored stroke check		Axes over travel
	Help function		Descriptions for alarm,parameter,etc.
Other Function	Self-diagnosis function		Self check function by NC
	Custom macro B		600pcs.
	Language select		English/Japanese/Chinese/Korean/e.t.c
Memory	Alarm history display		50pcs

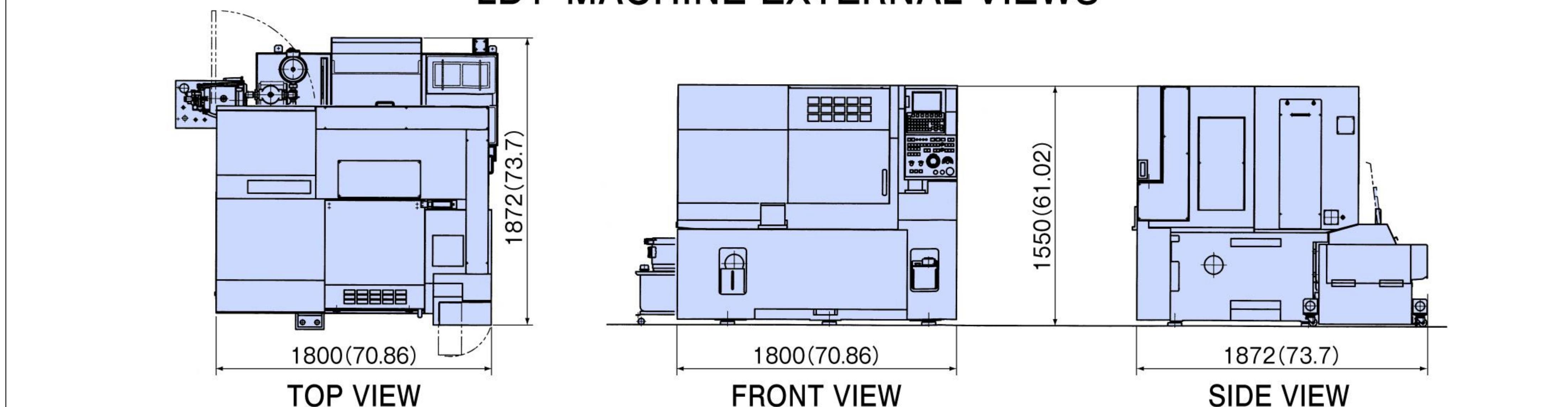
■ MACHINE STANDARD ACCESSORIES

- Door interlock device 1set
 - Coolant unit 1set
 - Leakage circuit breaker 1set
 - Hydraulic unit 1set
 - Work light 1set
 - Full cover
 - Blind cantor turret 4set
 - Hand tool 1set

■ MACHINE OPTIONAL ACCESSORIES

- Driven-tool unit for O.D.
 - Driven-tool unit for end face
 - Inner cam unit
 - □ 20mm OD/Face universal toolholder block
 - Boring bar holder $\phi 25$
 - Door automatic open/close device
 - Auto loader
 - Work discharge conveyor
 - Chin conveyor
 - 6inch hydraulic chuck

LD1 MACHINE EXTERNAL VIEWS



TMW

● Due to continual research and improvement the above specifications are subject to change without notice.

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