DL-32/1000 Horizontal CNC Lathe

Operating Manual

(Mechanical Part)

DMTG

Dalian Machine Tool Group Corp.

The People's Republic of China

1. General

This multi-function CNC lathe, characterizing dual-axis, with the two axes moving simultaneously and semi-closed loop control is structured in one piece. Fot the machine, the 45• slant guideway is mounted, which can be operated easily and reliably with FANUC 0i-TC or other advanced CNC system available at home and abroad. αP50 wide-range main motor,22/30kW, is used as the spindle motor, which is of high power, high torque and high speed.

This machine with wholly-enclosed guarding, slide door in the left and control panel in the right layout as well as the beautiful appearance, shows the man machine function to a great extent.

Motor drive swivel tool post and 12-station (or 8-station) tool disc from Italy are set up for the machine, which have the charateristics of high index speed and reliable positioning.

Independent automatic chip conveyor and cooling systems are used in the machine, which are easy to operate and convenient for maintenance.

Tool setter adopted by this machine can be used more easier, and get more accurate positioning.

1.1 Structure of machine

(1)Main machine (including bed, headstock, tailstock & lonitudinal drive)

(2)Tool post and 12-station (or 8-station) tool disc

(3)Automatic chip conveyor and cooling device

(4)Hydraulic system

(5)Electric system

(6)Machine guarding

(7)CNC device (including eletric cabinet)

(8)Machine lubrication unit

(9)Machine accessories

1.2 Machine specifications

NO.	ITEM			UNIT	SPECIFICATIONS
1	Max. swing over bed			mm	680
	Max.swing over carriage			mm	410
	Max. machining length			mm	1000
	Spindle center to bed guideway			mm	360
	Spindle center line to floor			mm	1150
2	travel	X-axis		mm	375
		Z-axis		mm	2030
3	feedrate	X-axis	work feed	mm/min	0.01-9000
			rapid feed	mm/min	13000
		Z-axis	work feed	mm/min	0.01-9000
			rapid feed	mm/min	13000
4	spindle	Max. speed		r/min	2000
		Spindle taper bore		Metric	120
		front spindle bearing dia.		mm	ø170
		spindle bore dia.		mm	ø100
		spindle power		kW	22/30
5	carriage	No.s of tool station		station	12(8)
		tool selection			adjacent/random
		swing dia.of o/s tip		mm	ø570
		tool shank of o/s tool		mm	32x25
		max. dia of boring bar		mm	ø50
		dia.of boring bar		mm	ø40;ø32;ø25;ø20
		tool change time		S	0.4
6	tailstock	max. travel of tail quill		mm	180
		quill dia.			ø160
		dia. of quill cylinder		mm	ø105
		dia. of quill piston rod		mm	ø50
		quill taper		Morse	5

NO.	ITEM			UNIT	SPECIFICATIONS
7	motor	Spindle drive motor	power	kw	22/30
			speed	r/min	4500
		X-axis servo motor	torque	Nm	22
			speed	r/min	2000
		Z-axis servo motor	torque	Nm	22
			speed	r/min	2000
		Coolant pump motor	power	kW	0.4
			flow amount	L/min	40
		chip conveyor motor	power	kW	0.55
			speed	m/min	1400
		lubricator motor	power	W	3
			displacement	ml/time	2.5-5.5
8	ballscrew	X-axis	diameter	mm	ø50
			pitch	mm	10
		Z-axis	diameter	mm	ø50
			pitch	mm	10
9	chuck model			V-215 (Yi chuan, Taiwan)	
10	chuck cylinder model			MS200 (Yi chuan, Taiwan)	
11	others	machine dimension (L x W xH)		mm	6740×1928×2240(with chip conveyor)
		machine dimension (L x W xH)		mm	5280×1928×2240(without chip conveyor)
		main machine weight		kg	13000