

# DX 150 CNC Turning Center



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#### **OVERVIEW**

A turning machine with a cutting edge technology and an neophilic design now opens up a new era for the Dry Machining Technology world. Specially conceptualized design keeps the machine at an angle of 90° so that it can provide various advantages. One of the advantages allows vertical fall of chip and coolant, preventing any damages to linear motion guideways and ball screws, which increases overall machine life.



# **STRUCTURE**

State of the Art 90° Vertical Monoblock structure is made out of FG 300 Grade Cast Iron using nobake method providing stability and least distortion enabling heavy cuts and faster production. The Z-Axis is moving on a well spaced High Precision Linear Motion Guide ways, High Precision ball screws and pre-tensioned Double Nut assembly Lubricated through a Centralized & Programmable Lubrication System. Axis Motors are directly coupled to the ball screws through precision Bellow Coupling assembly for transmitting full power without transmission loss resulting optimum Tool Life.

## **3 POINT LEVELING**

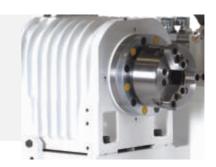


Structural design followed with the concept of 3PL provides it with higher base rigidity due to which twisting of bed is eliminated during actual working load conditions. This feature enables DX 150 to be installed and relocated quickly and easily.



#### **HEAD STOCK & SPINDLE**

Head Stock made out of closed grain FG 300 casting is provided with fins for better heat dissipation. The main Spindle is housed in a cartridge containing a match pair of three super precision angular contact bearings in front and a match pair of two super precision angular contact bearings at the rear, greased for life. The spindle is driven by toothed belt for optimum power transmission.



# HIGH SPEED SERVO TOOL TURRET

DX 150 machine is equipped with high speed and high precision Bi-directional Servo Turret with hydraulic clamping system achieved by 3-piece hirth coupling. Tool change time is just 0.5 second.

## TAIL STOCK

Tail Stock is made of closed grain FG 300 casting and the quill is hydraulically actuated through foot switch, provided with revolving center.



#### **OPERATOR PANEL**

The newly designed "Easy-to-Operate" operator panel of the machine is made considering operator friendliness and TPM concept.



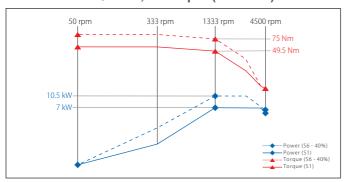
#### PRODUCTIVITY IMPROVING OPTIONS

DX 150 design gives flexibility by enabiling user to interface varius productivity improving options making it even more efficient to achieve different critical productivity targets. A combination of bar feeder, bar puller & part catcher can really give impetus for mass production type of application from long bars. Also for a suer having variety of shafts from from small to larger lengths can combine options of steady rest and giving better edge for batch type variety productions.

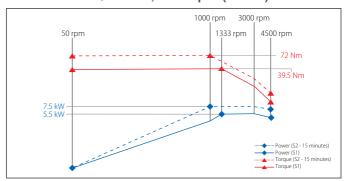


#### **POWER TORQUE DIAGRAM**

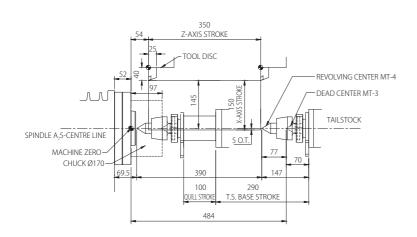
10.5 / 7 kW, 4500 rpm (Siemens)

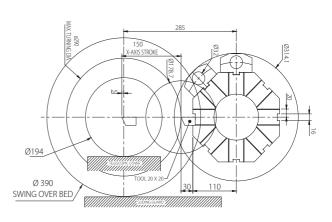


7.5 / 5.5 kW, 4500 rpm (Fanuc)



#### **MACHINING RANGE & INTERFERENCE DIAGRAM**









#### **TECHNICAL SPECIFICATION**

			DX 150
Capacity			
Swing Over Bed		mm	375
Std. Turning Diameter		mm	150
Max. Turning Diameter		mm	250
Max. Turning Length		mm	350
Slides			
X-Axis Travel (Cross)		mm	150
Z-Axis Travel (Longitudinal)		mm	350
Rapid Feed (X & Z Axis)		m/min	24
Main Spindle			
Spindle Motor Power - Fanuc		kW	7.5 / 5.5
Spindle Motor Power - Siemens		kW	10.5 / 7
Spindle Bore Dia.		mm	50
Spindle Nose			$A_25$
Max. Bar Capacity		mm	38
Spindle Speed Range		rpm	50-4500
Turret (Servo)			
No. of Stations			8
Max Boring Bar Diameter		mm	32
Tool Size		mm	20 x 20
Tailstock Quill Diameter		mm	75
Quill Stroke		mm	100
Thrust (Adjustable)		Kgf (Max.)	300
must (Aujustable)		rigi (iviaxi)	000
Accuracy ( as per VDI/DGQ 3441)			
Positioning Uncertainty	(P)	mm	0.007
Repeatability (Ps Mediu	um)	mm	0.005
Other Data			
Weight (Approx.)		Kg	3000
Dimension (Approx.) :	Length	mm	1950
	Width	mm	1375
	Height	mm	1950

#### **CONTROLLER**

The CNC System FANUC 0i TF or SIEMENS 828D Basic T offered for DX 150 machine.

#### STANDARD FEATURES

- AC Spindle Drive
- AC SERVO Digital Drive
- L. M. Guideways
- Hyd. Chucking
- 8 Station Bi-directional Servo Turret
- Auto & Manual Coolant System
- Centralised & Programmable Lubrication
- Laser Calibrated Axis for Highly Precise Positioning Accuracy and Repeatability
- Electricals with Quality Devices & Panel with Cooling System
- Tailstock with Hydraulic Quill

#### OTHER PRODUCTIVITY IMPROVING OPTIONS

- Chip Conveyor (Rear or Side)
- Bar Feeder
- Bar Puller
- Part Catcher
- Auto Door
- Automatic Tool Setting
- Hyd. Collet Chuck
- Live Quill (Built-in Revolving Center)
- Tool Life Management
- Manual Guide i (Fanuc)
- Easy SMS System (Siemens)
- Shopturn (Siemens)
- Fully Tooled up Solution to Meet Customer Needs

Note: • All above information is subject to change arising out of continuous product improvement.

<sup>\*</sup>Max. Turning Length Depends upon Work Holding Devices, Tooling and Job.

<sup>•</sup> The description 'standard accessories / feature' conforms to its list; not the photo of machine shown in the catalogue.

**JYOTI CNC AUTOMATION LTD.**jyoti.co.in

Regd.Works: Plot No.,G-506, Lodhika GIDC, Vill.-Metoda, Dist.-Rajkot - 360 021.

Gujarat (India) T +91-2827-306100-101 F +91-2827-306141

E info@jyoti.co.in, sales@jyoti.co.in

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Note: Specified information are subject to change arising out of continuous product improvement without notice. The description standard accessories/feature conforms to its list; not the photo of machine show in the catalogue. Other controller will have different configuration. Machine images are shown with option.

