

DX 200 Series

CNC Turning Centers

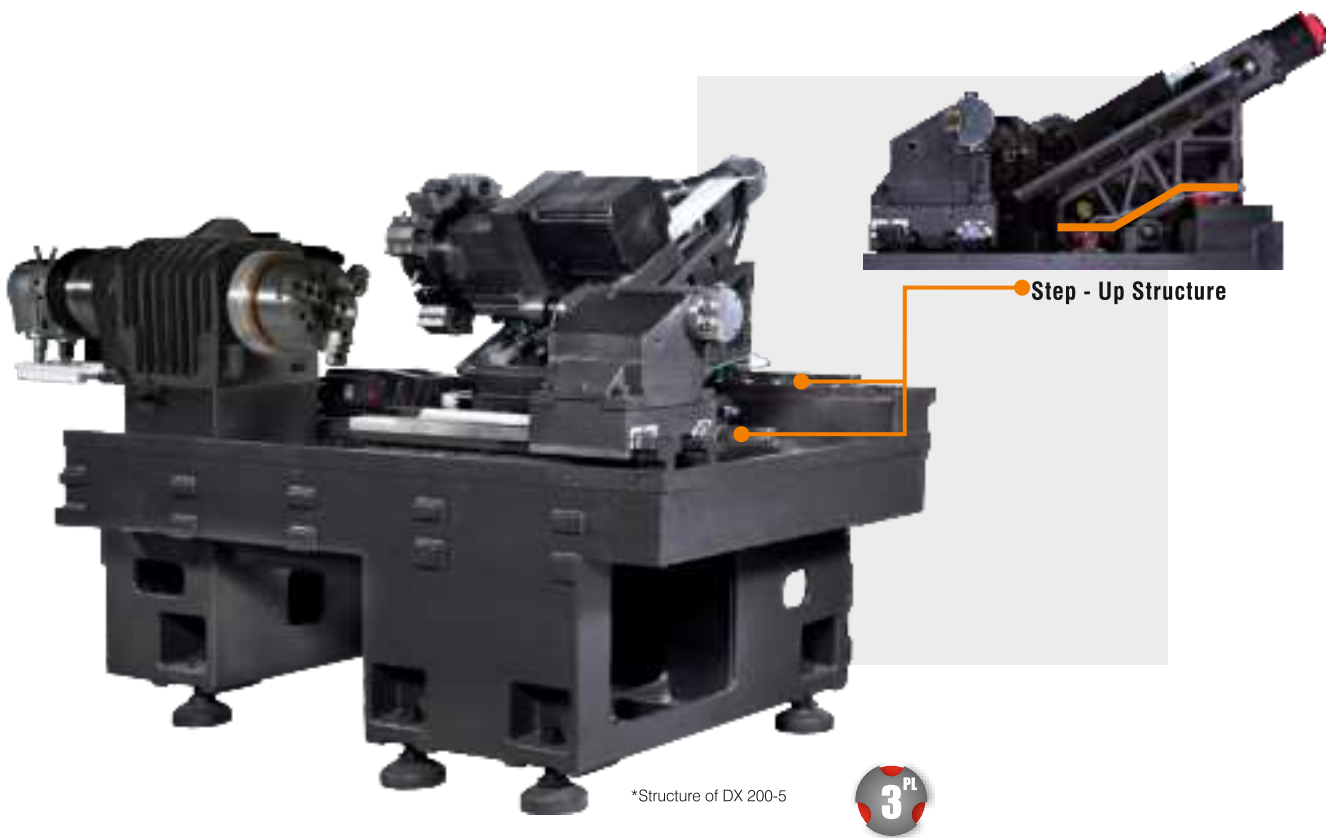


DX 200 Series

CNC Turning Center

OVERVIEW

DX 200 Series offers a range of high technology CNC Turning Center to deliver fastest throughput needed in present competitive market. This range is the result of continuous innovative development made by Jyoti in the field of machine tools ever since we have started manufacturing CNC Turning Center. The Series is resultant of innovation and customer feedback for performance in the product. With unique features, DX 200 delivers optimum performance to match demand of various sized workpiece applications.



RIGID STRUCTURE

The rigid bed and single piece 30° slant saddle are made out of high grade cast iron for stability and least distortion enabling heavy cuts and faster production. With virtually no vibration, it means higher surface finish even on hard materials. Step-up structure concept enables consistent machining performance even for larger diameter jobs due to widely spaced guide ways.

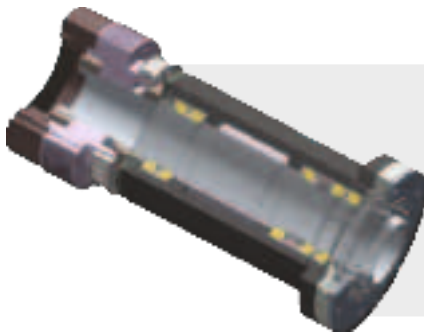
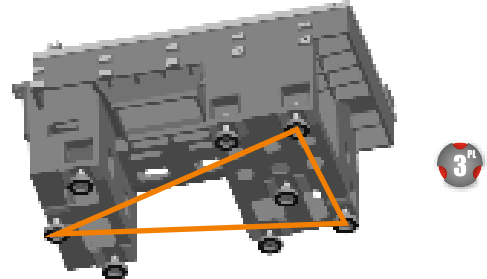
EFFICIENT CHIP DISPOSAL

Ergonomically designed concept of DX 200 Series enables it to give efficient chip disposal, with such design chips will directly fall down into chip tray and also removing of chips from chip tray without disturbing of machining.



3-POINT LEVELING SYSTEM

Due to high rigid base design and 3 point leveling effect of bed twisting can be eliminated. Quick Installation and relocation of DX 200 series made easy with this feature.



HEADSTOCK & SPINDLE

Headstock is made from closed grain FG 300 casting and provided with fins for better heat dissipation.

Main spindle is manufactured in-house using world class machinery and assembled in a dust free temperature controlled environment. Spindle is housed in a cartridge with 3 super precision angular contact bearings in the front and 2 angular contact bearings at the rear end. This arrangement takes care of radial as well as axial loads.

HIGH SPEED SERVO TURRET

DX 200 Series machine are 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 which help to reduce cycle time.



TAILSTOCK

A manually movable tailstock with hydraulically actuated quill is a standard feature of the machine. Programmable tailstock with hydraulic movement is offered as an option.

ERGONOMIC DESIGN

The newly designed Easy-to-Operate, Operating Panel of the machine is made considering the reliability and human comfort and operator friendliness.



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PRODUCTIVITY IMPROVING OPTIONS

DX 200 Series design concept gives flexibility for a user having variety of shafts from small to larger lengths can combine options of steady rest and programmable tailstock giving better edge for batch type variety productions.



Steady Rest



Programmable Tailstock



Tool Measuring Probe

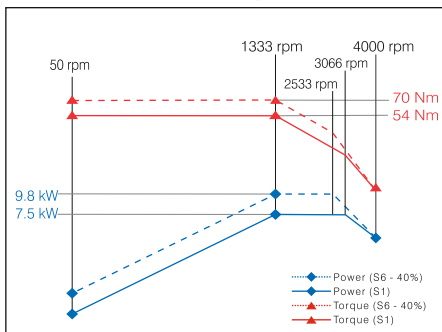


Part Catcher

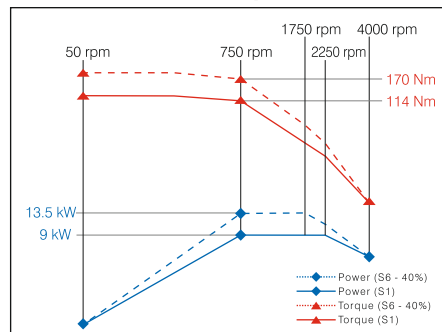
A combination of bar feeder, bar puller & part catcher can really give impetus for mass production type of application from long bars.

POWER TORQUE DIAGRAM

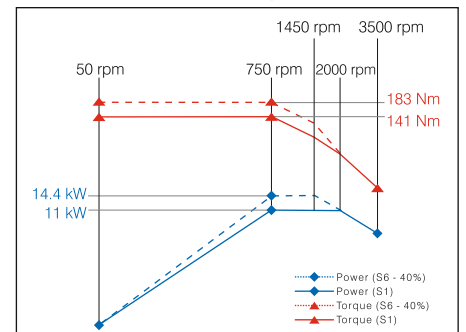
9.8 / 7.5 kW, 4000 rpm (Siemens)



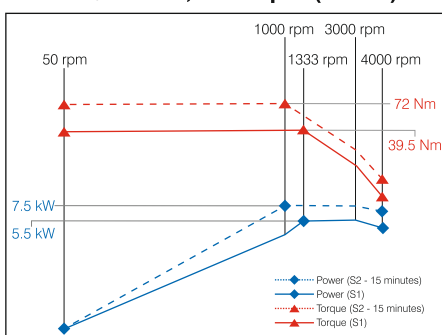
13.5 / 9 kW, 4000 rpm (Siemens)



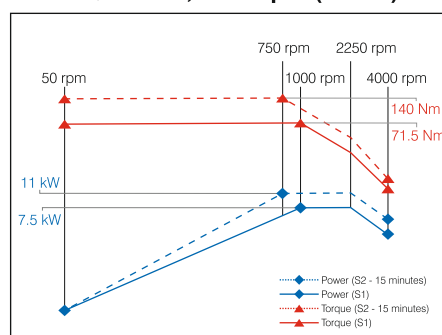
14.4 / 11 kW, 3500 rpm (Siemens)



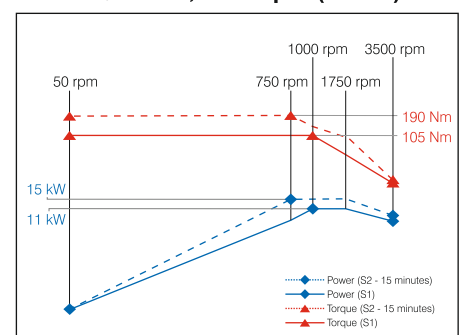
7.5 / 5.5 kW, 4000 rpm (Fanuc)



11 / 7.5 kW, 4000 rpm (Fanuc)



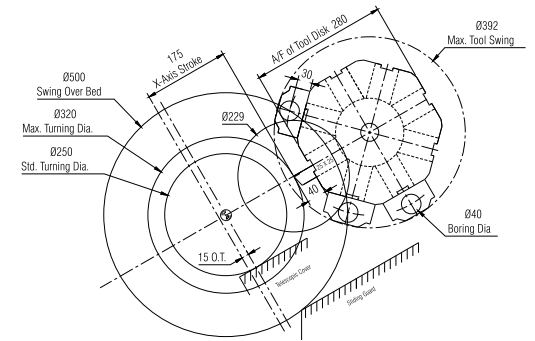
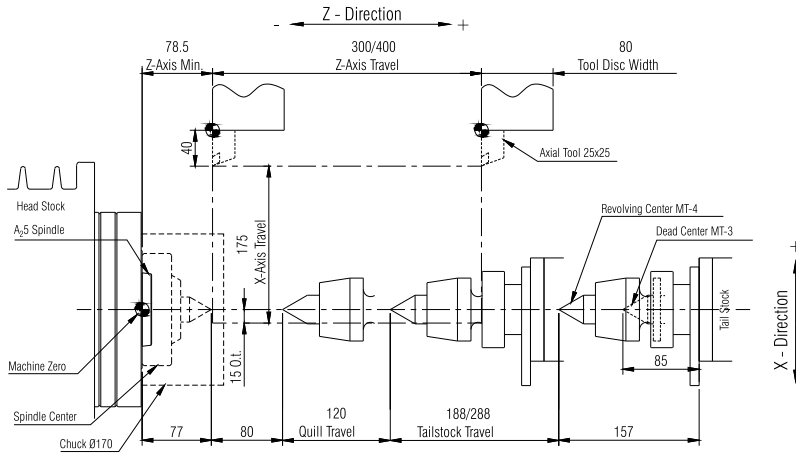
15 / 11 kW, 3500 rpm (Fanuc)



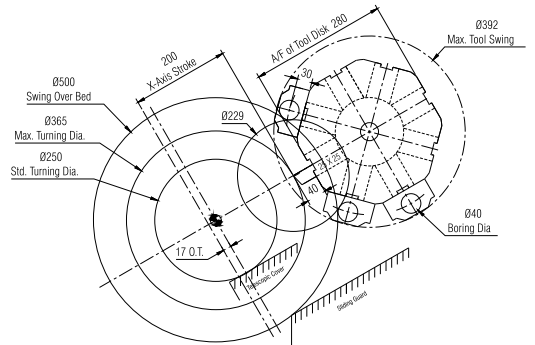
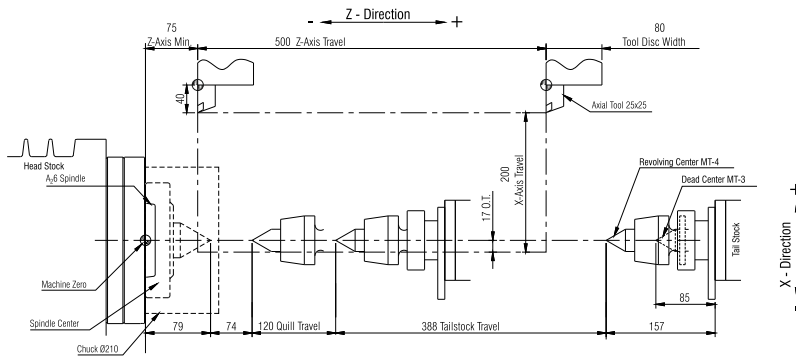


MACHINING RANGE & INTERFERENCE DIAGRAM

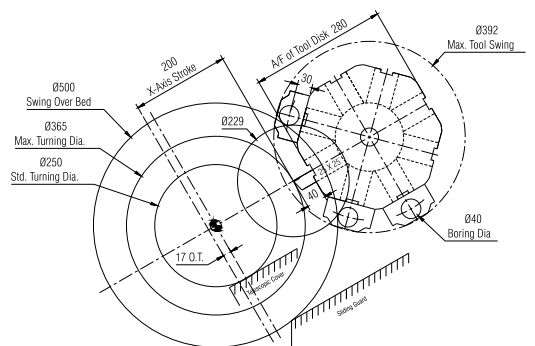
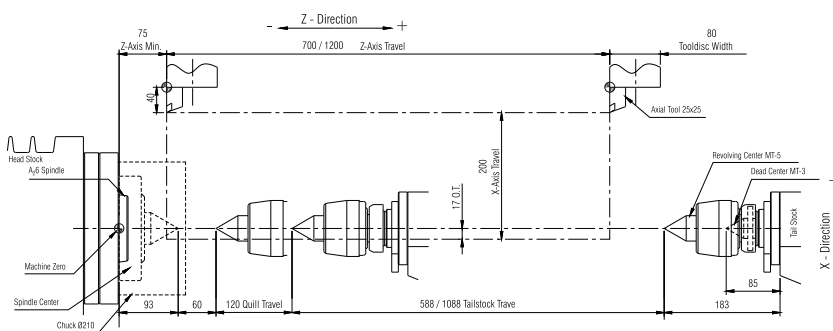
DX 200 - 3 / DX 200 - 4



DX 200 - 5



DX 200 - 7 / DX 200 - 12



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CNC Turning Center

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TECHNICAL SPECIFICATION

		DX 200 - 3 A	DX 200 - 3 B	DX 200 - 4 A	DX 200 - 4 B		DX 200 - 5 A	DX 200 - 5 B	DX 200 - 7 A	DX 200 - 7 B	DX 200 - 12 A	DX 200 - 12 B
Swing Over Bed	mm	500	500	500	500		500	500	500	500	500	500
Std. Turning Dia.	mm	250	250	250	250		250	250	250	250	250	250
Max. Turning Dia.*	mm	320	320	320	320		365	365	365	365	365	365
Max. Turning Length*	mm	300	300	400	400		500	500	700	700	1200	1200
Slides												
X-Axis Travel (Cross)	mm	175	175	175	175		200	200	200	200	200	200
Z-Axis Travel (Longitudinal)	mm	300	300	400	400		500	500	700	700	1200	1200
Rapid Feed (X & Z Axis)	m/min	24	24	24	24		24	24	24	24	24	24
Main Spindle												
Spindle Motor Power - Siemens	kW	9.8 / 7.5	13.5 / 9	9.8 / 7.5	13.5 / 9		13.5 / 9	14.4 / 11	13.5 / 9	14.4 / 11	13.5 / 9	14.4 / 11
Spindle Motor Power - Fanuc	kW	7.5 / 5.5	11 / 7.5	7.5 / 5.5	11 / 7.5		11 / 7.5	15 / 11	11 / 7.5	15 / 11	11 / 7.5	15 / 11
Spindle Speed Range	rpm	50-4000	50-4000	50-4000	50-4000		50-4000	50-3500	50-4000	50-3500	50-4000	50-3500
Spindle Bore	mm	55	70	55	70		70	90	70	90	70	90
Spindle Nose		A ₂ 5	A ₂ 6	A ₂ 5	A ₂ 6		A ₂ 6	A ₂ 8	A ₂ 6	A ₂ 8	A ₂ 6	A ₂ 8
Max. Bar Capacity**	mm	44	52	44	52		52	75	52	75	52	75
Turret												
No. of Station		8	8	8	8		8	8	8	8	8	8
Max. Boring Bar Dia.	mm	40	40	40	40		40	40	40	40	40	40
Tool Size (Cross Sectional)	mm	25 x 25	25 x 25	25 x 25	25 x 25		25 x 25	25 x 25	25 x 25	25 x 25	25 x 25	25 x 25
Tail Stock												
Quill Dia.	mm	85	85	85	85		85	85	85	85	85	85
Quill Stroke	mm	120	120	120	120		120	120	120	120	120	120
Thrust	Kgf	300	300	300	300		500	500	500	500	500	500
Accuracy (as Per VDI/DGQ 3441)												
Positioning Uncertainty (P)	mm	0.007	0.007	0.007	0.007		0.007	0.007	0.010	0.010	0.010	0.010
Repeatability (Ps Medium)	mm	0.005	0.005	0.005	0.005		0.005	0.005	0.005	0.005	0.005	0.005
Other Data												
Machine Weight (Approx.)#	Kg	3000	3100	3000	3100		3400	3500	4300	4400	4800	4900
Machine Dimension (Approx.)#:												
Length	mm	2150	2150	2150	2150		2350	2350	3125	3125	3625	3625
Width	mm	1440	1440	1440	1440		1540	1540	1800	1800	1800	1800
Height	mm	1770	1770	1770	1770		1710	1710	1715	1715	1715	1715

* Depends upon clamping arrangement, Tooling and Job. ** Bar Capacity - Depends on appropriate clamping between chuck and cylinder as well as make of chuck
Refer Machine Detailed Layout for overall machine dimensions & space requirements.

CONTROL SYSTEM

The CNC System offered with the DX 200 series machine is with latest digital controller from FANUC 0i TF Plus or SIEMENS 828D.

STANDARD FEATURES

- AC Spindle Drive
- AC SERVO Digital Drive
- L.M Guideways
- Hydraulic 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 AC
- Tailstock with Hydraulic Quill

PRODUCTIVITY IMPROVING OPTIONS

- Industry 4.0 Complied with 7th Sense
- Chip Conveyor
- Bar Feeder
- Bar Puller
- Part Catcher
- Programmable Tailstock
- Auto Door
- Gantry / Robot Interfacing
- Live Quill (Built-in Revolving Center)
- Steady Rest
- Follower Rest for DX 200 - 7/12
- Two Speed Gear Box for A₂6 Spindle
- 12 Station Turret
- Manual Guide-0i (Fanuc)
- Easy SMS System (Siemens)
- Shopturn (Siemens)
- Fully Toolled up Solution

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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.

