

DXG 100

CNC Chucker with Gantry Robot



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OVERVIEW

DXG 100 is developed by considering industry requirement of small disc - type precision components in huge quantities. The mono block structure of the machine is designed to keep the rigidity at higher dynamics. This machine is ideally suitable for producing precision components in mass which could even multiply the productivity with the integration of Gantry auto loading. Building base for TPM friendliness DXG 100 has a linear tooling system enabling it to avoid time given for indexing.



STRUCTURE

Working on the principal to eliminate joints DXG 100 is a slant bed machine with monoblock design that enables it to reduce vibrations even at higher parameters providing it better rigidity while machining and ability to absorb torsion. Such a design ensures highest precision, metal cutting capacity and better tool life. Integrated nut and bearing housing for X-Axis provides it with higher stiffness during movement of table.

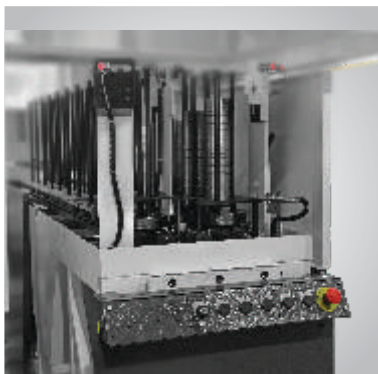
3 - POINT LEVELING

Structural design followed with the concept of 3 PL provides it with higher base rigidity due to which twisting of bed is eliminated during actual working load conditions. This feature enables DXG 100 to be installed and relocated quickly and easily.



INTEGRAL 2-AXIS GANTRY ROBOT

The Unique feature of DXG 100 is its unmanned loading to unloading operation. The machine is equipped with the gantry robot and a dual gripper swivel unit with a change over station for second operation as an option.



AUTO FEEDER

Auto feeder is essential option for DXG 100 with gantry robot which can accommodate input workpieces in quantity for autoloading. Such an option can be customize as per customer application.

GANG TYPE TOOLING

The concept of gang type block in linear tooling is having a table surface with T-slots on which 5 tool posts could be accommodated separately with minimum interference. Linear tooling also performs a main role in overall cycle time as the tool change time is quite fast.

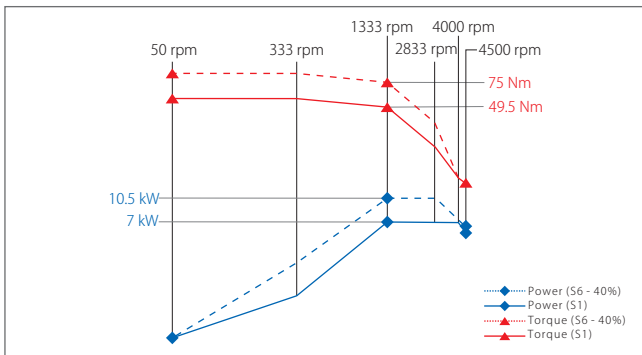


HEAD STOCK & SPINDLE

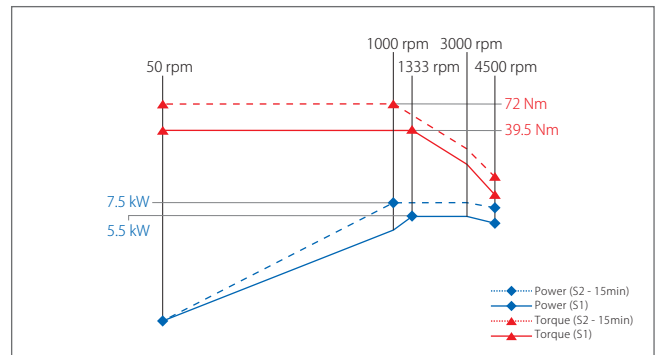
Made out of closed grain FG 300 casting is provided with fins for better heat dissipation. High precision Spindle is housed in a cartridge with (3+2) for A₅ spindle and (2+2) for A₄ spindle with super precision angular contact bearings in front & rear. This enables very high precision and stiffness in both axial and radial direction. The bearings are grease lubricated for life.

POWER TORQUE DIAGRAM

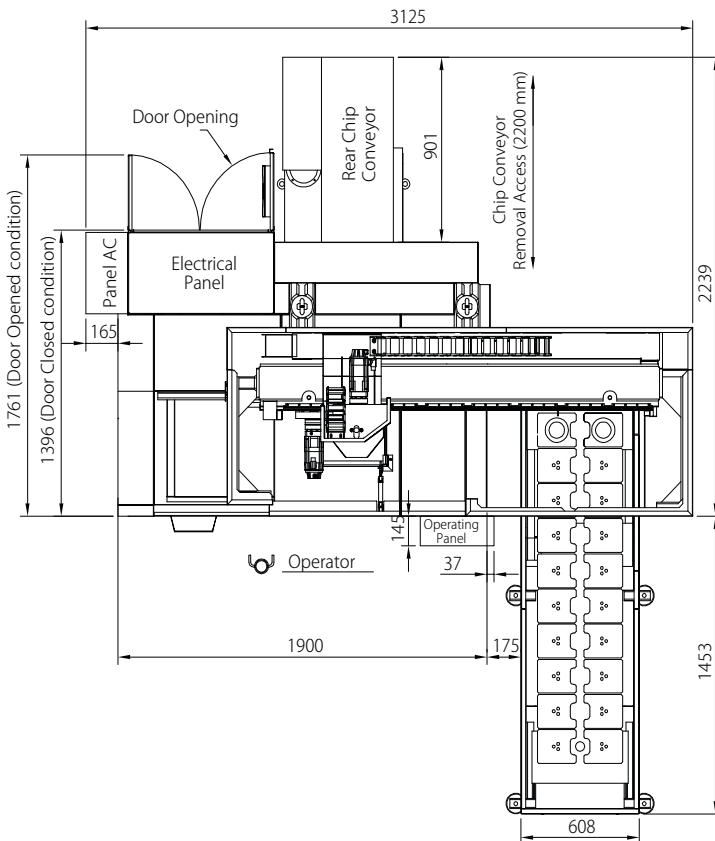
10.5 / 7 kW, 4500 rpm (Siemens)



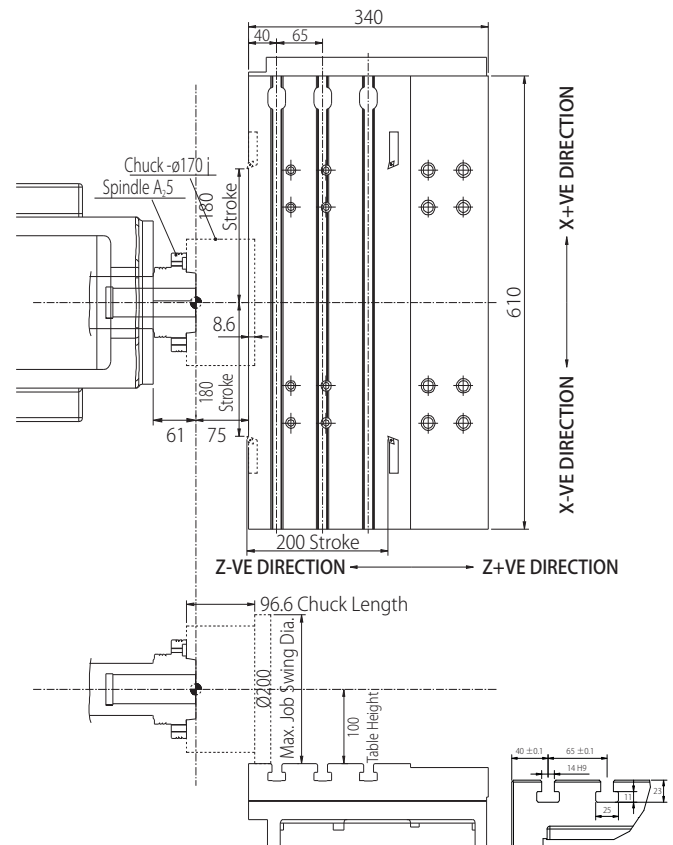
7.5 / 5.5 kW, 4500 rpm (Fanuc)



LAYOUT DIAGRAM



INTERFERENCE DIAGRAM





TECHNICAL SPECIFICATION

DXG 100

Capacity

Max. Swing Over Bed	mm	470
Std. Turning Dia.	mm	100
Max. Job Swing Dia.	mm	200
Max. Turning Length	mm	200*

Slides

X-Axis Travel (Cross)	mm	360
Z-Axis Travel (Longitudinal)	mm	200
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	mm	50
Max. Bar Capacity	mm	38
Spindle Nose		A ₂ 5
Spindle Speed Range	rpm	50-4500

Tooling (Gang Type)

Max. Boring Bar Capacity	mm	40
Tool Size (Cross Sectional)	mm	25 x 25

Automated Gantry Robot Loader/Unloader

Work Piece Dimension (Loader Capacity)	mm	Ø 85 x 45
Max. Part Weight (One Side)	Kg	1
Loader X (Left/Right) Axis Stroke	mm	1500
Max. Speed (X Axis)	m/min	120
Loader Y (Up/Down) Axis Stroke	mm	560
Max. Speed (Y Axis)	m/min	110
Jaw Stroke (Loader Chuck) / Rotation (Swivel Unit)	mm/deg.	4 (per Jaw) / 90°

Accuracy (as per VDI/DGQ 3441)

Positioning Uncertainty (P)	mm	0.007
Repeatability (Ps Medium)	mm	0.005

Other Data

Machine Weight (Approx.)	kg	2900
Machine Dimension (Approx.):		
Length	mm	2960
Width	mm	1400
Height	mm	2165

* Depends on Work Holding Device, Tooling & Work Piece

Note : • All above information is 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 shown in the catalogue.

CONTROL SYSTEM

The CNC System Fanuc 0i TF or SIEMENS 828D offered with the DXG 100 machine.

STANDARD FEATURES

- AC Spindle Drive
- AC SERVO Digital Drive
- L. M. Guideways
- Hyd. Chucking
- Turning Tool Holders
- Auto & Manual Coolant System
- Centralised & Programmable Lubrication
- Laser Calibrated Axis for Highly Precise Positioning
- Accuracy and Repeatability
- 2-Axis Programmable Gantry Robot
- Electricals with Quality Devices & Panel with A. C.

PRODUCTIVITY IMPROVING OPTIONS

- Chip Conveyor (Rear or Front)
- Different Layouts of Job Feeder
- Air Seat Sensing for Job Clamping
- Turn Around Station for 2nd Operation
- Auto Gauging System (Input / Output) with Cleaning Unit
- Air Seat Sensing
- Coolant Through Tool
- Tool Life Management
- Hydraulic Collet Chuck
- Auto Door
- Auto Loader / Feeder
- Part Catcher
- Automatic Tool Setting
- Manual Guide i (Fanuc)
- Easy SMS System (Siemens)
- Fully Toolled up Solution to Meet Customer Needs

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ISO 9001 : 2008