

# DX 60 / DX 100

CNC Chucker

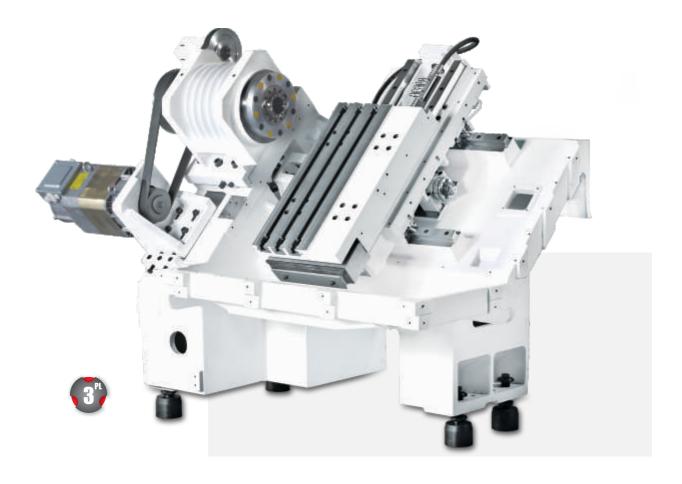


# DX 60 / DX 100

CNC Chucker

#### **OVERVIEW**

In the Family of DX-Series DX 60 & DX 100 are developed keeping in view 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 suited for producing precision components in mass which could even multiply the productivity with the integration of options like Bar Feeder and Gantry auto loading. Building base for TPM friendliness, DX 60 & DX 100 have linear tooling system enabling it to avoid time given for indexing of turret.



#### **STRUCTURE**

Working on the principal to eliminate joints, both DX 60 & DX 100 are slant bed machine with monoblock design that enables it to reduce vibration 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 also enables DX 60 & DX 100 to be installed and relocated quickly and easily.





#### **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  $A_{\!\scriptscriptstyle 2} 5$  spindle and (2+2) for  $A_{\!\scriptscriptstyle 2} 4$  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 life time grease lubricated.

### **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. However user can also accommodated more than 5 tools in gang block if job allows minimum interference. Linear tooling also performs a main role in overall cycle time as the tool change time is quite fast.





### **POLYGON MACHINING**

For machining multiple edged component DX 100 offers polygon machining with great accuracy and rapid machining including necessary software. Specially in brass part polygon machining DX 100 are most popular to achieve great productivity.

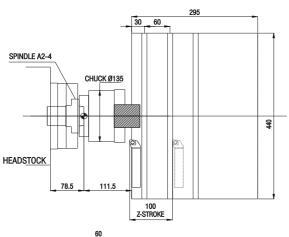
# **PART CATCHER**

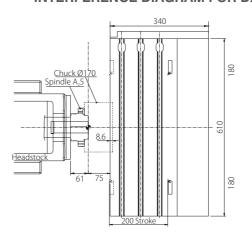
Part Catcher reduces non cutting time in machine and gives higher productivity by saving unloading time. DX 60 and DX 100 are offered with option of part catcher tray to obtain this high productivity solution.

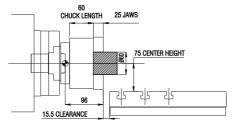


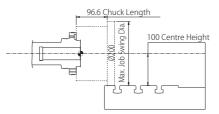
#### **INTERFERENCE DIAGRAM FOR DX 60**

#### **INTERFERENCE DIAGRAM FOR DX 100**

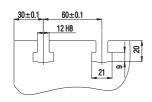


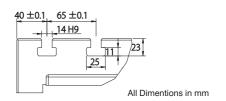






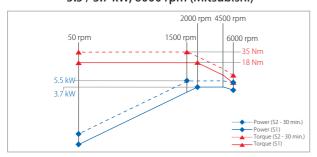
## **TABLE SLOT DETAILS**

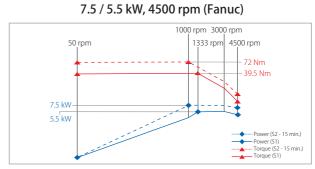




# **POWER-TORQUE DIAGRAM**

5.5 / 3.7 kW, 6000 rpm (Mitsubishi)

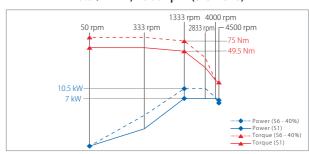




4.2 / 2.8 kW, 6000 rpm (Siemens)

500 rpm 4500 rpm 6000 rpm 26.8 Nm 18.8 Nm 18.8 Nm 18.8 kw

10.5 / 7 kW, 4500 rpm (Siemens)





#### **TECHNICAL SPECIFICATION**

|                               |         |       | DX 60            | DX 100           |
|-------------------------------|---------|-------|------------------|------------------|
| Capacity                      |         |       |                  |                  |
| Max. Swing Over Bed           |         | mm    | 360              | 470              |
| Max. Turning Length           |         | mm    | 60               | 200              |
| Max. Job Swing Dia.           |         | mm    | 145              | 200              |
| Std. Turning Dia.             |         | mm    | 60               | 100              |
| Slides                        |         |       |                  |                  |
| X-Axis Travel (Cross)         |         | mm    | 240              | 360              |
| Z-Axis Travel (Longitudinal)  |         | mm    | 100              | 200              |
| Rapid Feed (X & Z Axis)       |         | m/min | 24               | 24               |
| Main Spindle                  |         |       |                  |                  |
| Spindle Motor Power - Mitsuk  | oishi   | kW    | 5.5 / 3.7        | _                |
| Spindle Motor Power - Fanuc   |         | kW    | _                | 7.5 / 5.5        |
| Spindle Motor Power - Siemens |         | kW    | 4.2 / 2.8        | 10.5 / 7         |
| Spindle Bore                  |         | mm    | 38               | 50               |
| Spindle Nose                  |         |       | A <sub>2</sub> 4 | A <sub>2</sub> 5 |
| Max. Bar Capacity             |         | mm    | 29               | 38               |
| Spindle Speed Range           |         | rpm   | 50-6000          | 50-4500          |
| Full Power Speed Range        |         | rpm   | 1500-4500        | 1333-4000        |
| Gang Type Tooling             |         |       |                  |                  |
| No. of Tools for Std. Job Dia | . Range | Nos.  | 4                | 4                |
| Max. Boring Bar Capacity      |         | mm    | 20               | 40               |
| Tool Size (Cross Sectional)   |         | mm    | 20 x 20          | 25 x 25          |
| Accuracy (as per VDI/DGQ :    | 3441)   |       |                  |                  |
| Positioning Uncertainty (P)   | ,       | mm    | 0.007            | 0.007            |
| Repeatability (Ps Medium)     |         | mm    | 0.005            | 0.005            |
| Other                         |         |       |                  |                  |
| Machine Weight (Approx.)      |         | kg    | 1400             | 2500             |
| Machine Dimension (Approx.    | ):      | 9     |                  |                  |
| ( Ivle                        | Length  | mm    | 1425             | 1990             |
|                               | Width   | mm    | 1255             | 1470             |
|                               | Height  | mm    | 1560             | 1670             |
|                               | - 3     | -     |                  |                  |

**CONTROL SYSTEM** 

The Latest Digital CNC System SIEMENS 808D Advance T or MITSUBISHI E 70 offered with DX 60 while FANUC 0i TF or SIEMENS 828D Basic T comes with DX 100.

#### STANDARD FEATURES

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

#### PRODUCTIVITY IMPROVING OPTIONS

- Chip Conveyor (Rear or Front)
- Polygon Machining Solution
- Bar Feeder
- Bar Puller
- Part Catcher
- Tool Life Management
- Hyd. Collet Chuck
- Auto Door
- Auto Loader
- Automatic Tool Setting
- Fully Tooled up Solution to Meet Customer Needs
- Manual Guide i (Fanuc)
- Easy SMS System (Siemens)

Note: • All above information is subject to change arising out of continuous product improvement without notice.

 $<sup>^{\</sup>star}$  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.

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