

**Miyano**

**LX08c**

CNC Lathe





We proudly introduce an 8-inch chucking machine, developed through and close study of the basic performance required of machine tools.

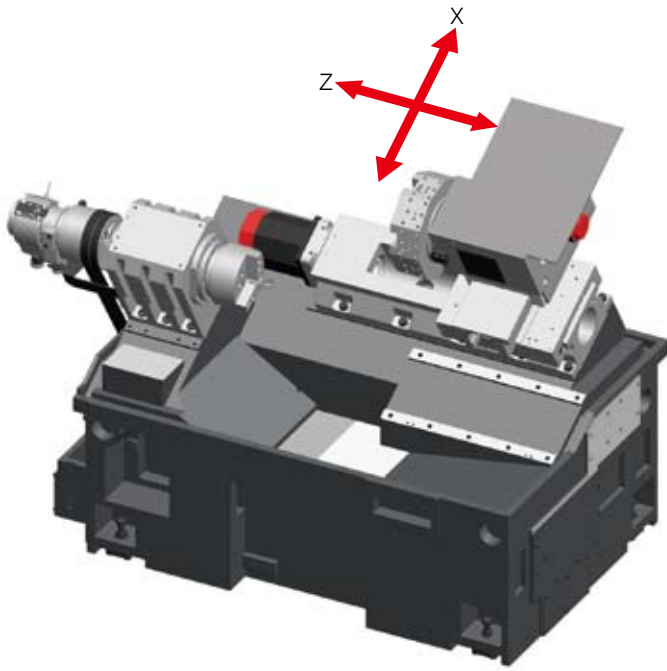
The rigid turret uses precision scraped square guideways providing excellent vibration damping characteristics, the rigid spindle is supported by double-row cylindrical roller bearings and angular contact ball bearings, and the heavy 30° slanted bed is in a platform-like surface table where the turret and the spindle are mounted.

The high levels of basic performance accomplished give consistently high machining accuracy.



## Rigid Base

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### Heavy Bed, the Basis for the Machine's High Performance

The 30° slanted bed, which is cast in one piece, provides outstanding thermal stability thanks to smooth chip flow to minimize dimensional changes during machining, and supports high-precision machining as a closed-structure rigid body.

### Reliable Flat Faces to Mount Major Machine Units

The flat faces of the 30° slanted bed where major machine units such as spindles and tool slides are mounted assure rigidity by adopting the platform-like surface table.

This structure maintains stable flatness in the face of external and internal factors that work to impair machining accuracy, minimizing changes in relative dislocation between the workpiece and tool nose.

## Turret

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### Highly Rigid Turret

For the turret, subject to cutting forces and vibration under severe conditions, precision scraped square guideways are used on all axes to increase rigidity and vibration damping characteristics.

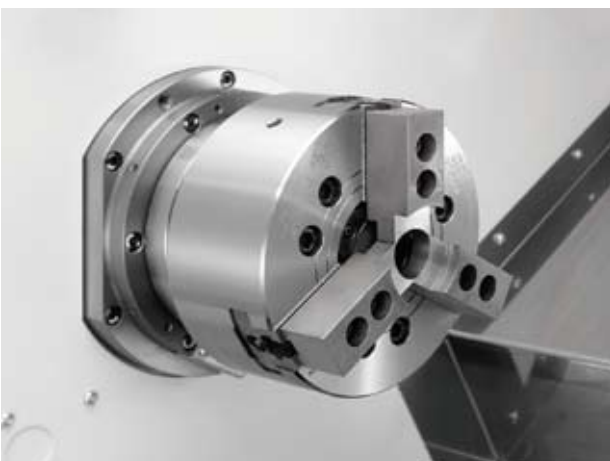
A two-piece curvic coupling is used to clamp the turret, prioritizing rigidity. This also realizes a compact mechanical structure.

### Heavy Cutting by Direct Mounting of Tools

Since 25-mm square tools can be directly mounted on the turret, tools can be clamped securely with a short overhang, enabling heavy cutting.

## Spindle

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### Rigid 8-inch Spindle

The spindles manufactured in the dedicated in-house production lines feature rigid double-row cylindrical roller bearings and angular contact ball bearings to support the spindle at the front and rear. By spacing them sufficiently far apart, the bearable moment load and straightness of the center of rotary axis are improved.

# Hard Turning



## From Grinding to Hard Turning

Hard turning is a kind of turning process for machining quenched materials on an NC lathe using CBN or ceramic tools.

### Advantages of hard turning over grinding

Initial investment cost (machine price) is low.

Several grinding processes can be integrated into turning processes performed on a single NC lathe.

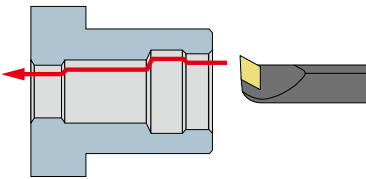
Since all machining processes including outer and inner turning, circular machining and free-form surface machining can be performed in one chucking, geometrical accuracy, such as straightness, squareness and concentricity, is considerably improved.

Cycle time can be reduced thanks to short loading and unloading time.

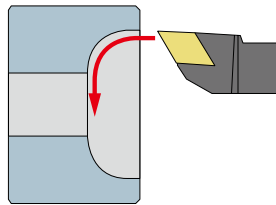
Dry cutting is environmentally friendly - reduced use of coolant, and recovery of resources by recycling chips instead of disposing of the sludge generated in grinding.

### Examples of circular and free-form surface machining

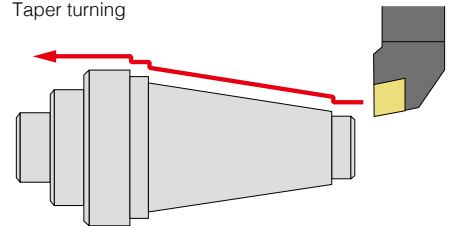
Internal turning  
(thread cutting, stepped internal turning)



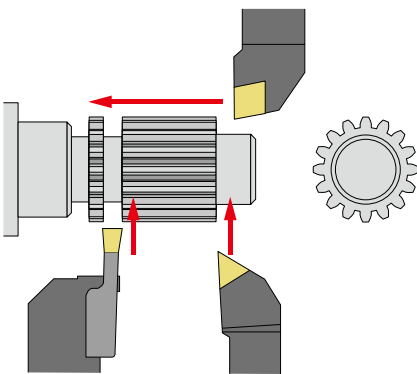
Spherical and free-form surface turning



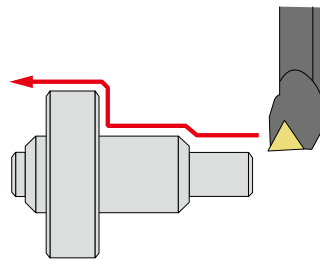
Taper turning



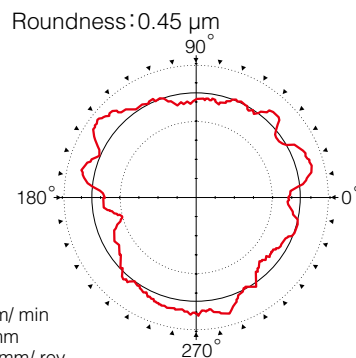
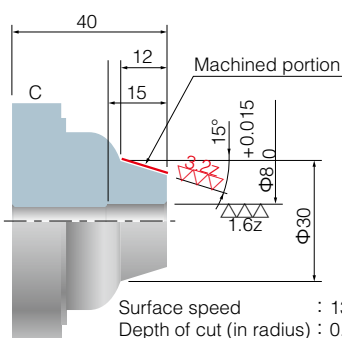
Grooving and width setting turning



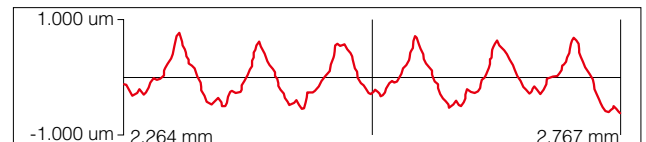
External + Face turning



### Machining accuracy in hard turning



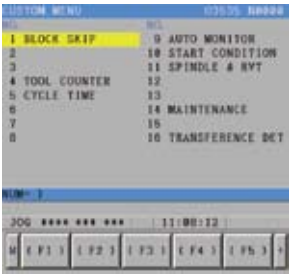
Surface roughness: 1.301 μm





# NC Custom menu

The functions convenient for machining and checking can be called in one-touch operations.



**CUSTOM MENU**  
Displays the list of custom screens.



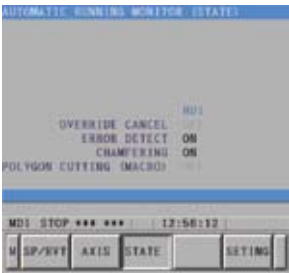
**BLOCK SKIP**  
Used to set block skip 1 to block skip 9.



**TOOL COUNTER**  
Used to set and reset the tool counter stop value and enter the tool wear offsets.



**CYCLE TIME**  
Measures the cutting time, non-cutting time and running time in each cycle.



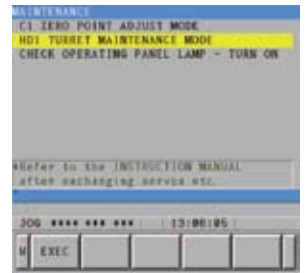
**AUTOMATIC RUNNING MONITOR**  
Displays the control status of each axis.  
Used to set ON / OFF for the machine lock function.



**START CONDITION**  
Used to set the start conditions for automatic running.



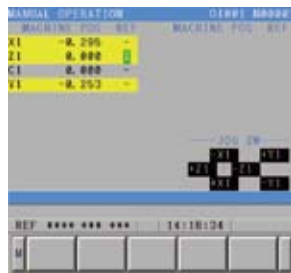
**SPINDLE & RVT**  
Used to set the rotational speed of the spindle and revolving tools.  
Used to set the spindle override.



**MAINTENANCE**  
Used to set ON / OFF for the maintenance items.  
Used to set ON / OFF for turret zero point adjustment.



**TURRET MAINTENANCE**  
Used to adjust the turret zero point.

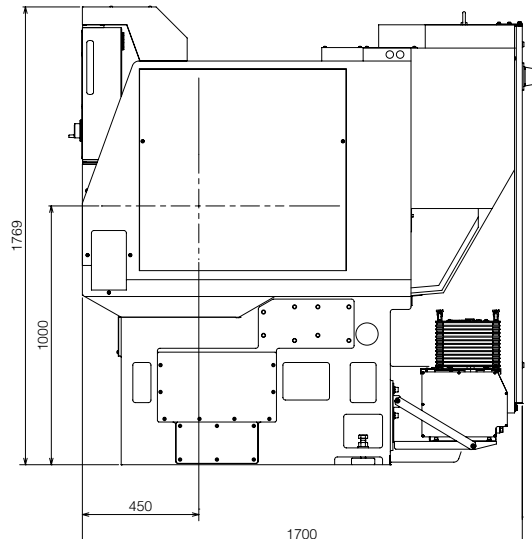
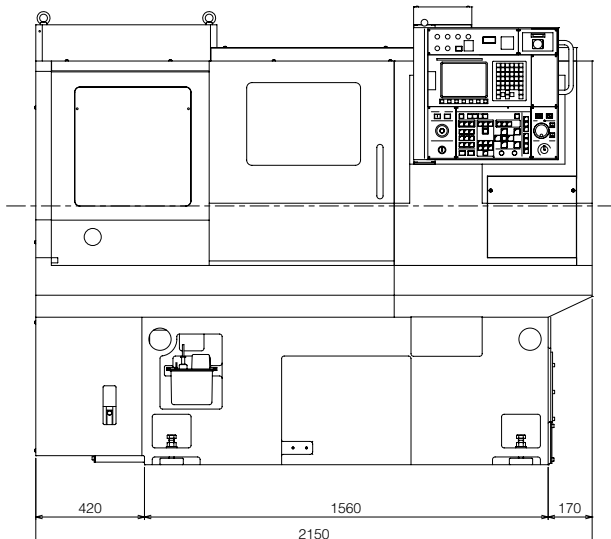


**MANUAL OPERATION**  
Displays the zero point lamp status and the machine coordinate of each axis.

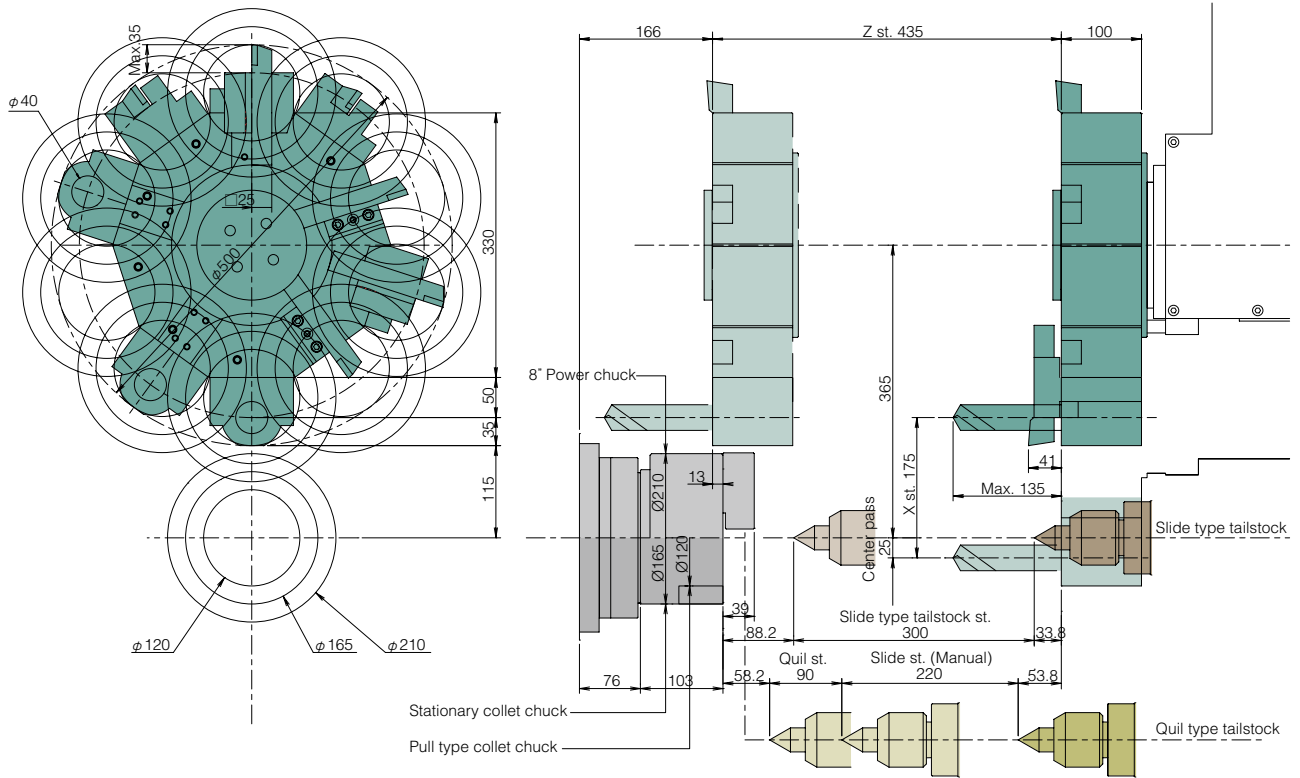


**OPTION DEVICE**  
Used to select an auxiliary device such as a part catcher to be operated manually.

## External view



## Tooling area



## Tooling system

