OP

3-axis coolant through ballscrew



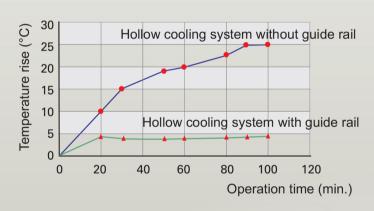
■ The 3-axis transmission guide rod system employs hollow cooling design to minimize heat and thermal expansion of ball screw in high-speed operations with cooling oils to balance high speed and high precision at the same time.

Linear guide rail with zero gaps

Linear glide rail feature

- Linear guide rail with zero gaps to enable uniform arc and bevel cutting with uniform surface strips.
- High-speed operation with drastically reduced driving horsepower.
- Employ linear guide rails to replace sliding with rolling for smaller friction loss, more sensitive response and higher positioning accuracy.
- Withstand load from all directions at the same time while maintaining multi-point contacts to keep cutting rigidity from degrading.
- Easy assembling and exchangeable plus simple lubrication structure.
- Linear guide rails wear very slightly which, in turn, lead to long service life.

C.T.B Effectiveness Graph



Test conditions

	Revolutions per minute (RPM)	Oil control temperature (°C)	Coolant flow rate L/min
Ø50xP30	1000	20	2.5

High precision linear scale OP



- The X/Y/Z axis may equip with optical ruler system to detect heat displacement due to fast machine motion and feed the data to traffic control for compensation. This is ideal for high-precision components machining.
- The optical rule system is equipped with gas protection device to prevent it from being contaminated by dust and oil mist, ensuring its accuracy, and maximize its service life.

Stable and reliable ATC

Arm type tool exchanger

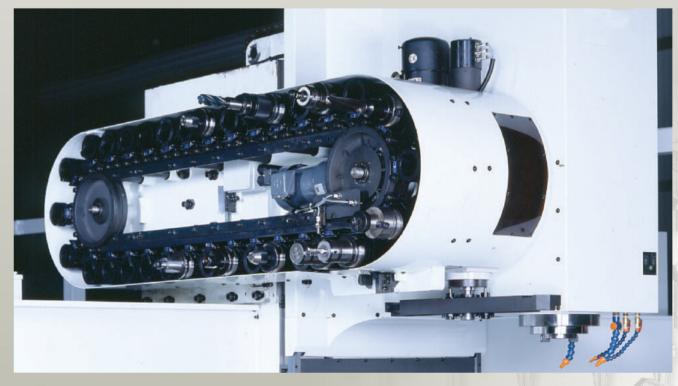


- Fast, simple, reliable and long-life tool exchange mechanism provides smooth and reliable tool exchange.
- The unique tool exchange device design, advanced cam drive, and any-position tool selection capacity, all under fast PLC software control.



- Thanks to million operation tests the tool exchange mechanism meets reliability requirements.
- Fast tool exchange mechanism saves noncutting time and improves production efficiency.
- The cam-driven tool magazine ensures high-precision rotation to enable smooth operation with heavy-duty tools.

Chain tool exchanger OP



■ Chain tool exchanger with 32-tool storage for machining works requiring multiple tools.

