

HIGH SPEED & PRECISION GRINDING SOLUTIONS

LG



DESCRIPTION

The LG external cylindrical grinding machine, equipped with linear motor technology, features direct drive spindles and a natural granite bed for high accuracy and thermal stability for high-precision grinding.

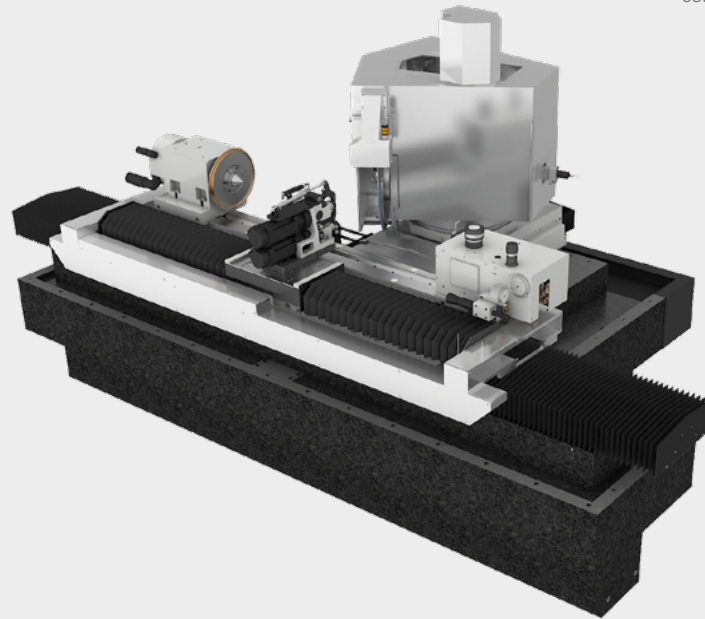
The machine can also combine conventional abrasive grinding with CBN or high-speed diamond grinding

by using a B-axis with electrospindle to suit potential customer needs. It is ideal for high volume production and highly flexible batch production runs of parts such as automotive components, ultraprecision hydraulic parts, cutting tools and form grinding e.g. cam grinding.

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LG RANGE	LG-200	LG-400	LG-600	LG-1000
Max. distance between centres	200 mm	400 mm	600 mm	1000 mm
Max. diameter to be ground	200 mm	290 mm	290 mm	290 mm
Max. weight between centres	30 kg	50 kg	50 kg	80 kg
Max. grinding wheel diameter	400 mm	500 mm	500 mm	500 mm
Max. wheel peripheral speed	140 m/s	140 m/s	140 m/s	140 m/s

**Based on customers' requirements, other machine capacities & configurations could be taken into account*



CORE TECHNOLOGY

Natural granite bed

- Machine beds made of natural granite.
- Best thermal stability properties, enhanced by permanent flushing with coolant flow. Consistency of dimensional accuracy on ground workpieces over time.
- It also ensures optimal vibration damping.

Linear motors

- X and Z slides driven by linear motors. High performance dynamics on the machine.
- Drive function with no mechanical contact. Less wear and lower maintenance.
- High-resolution linear scale to control the position of axes.
- Extremely high positioning and repeatability. Unbeatable accuracy for axis interpolation (X,Z,C).
- Temperature control via an efficient cooling system.

Torque motor B-axis

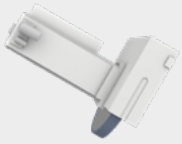
- Automatic wide-range stepless swivelling.
- Torque motor driven for zero backlash.
- High-resolution rotary scale to control perfect angular positioning.
- $\pm 1 \mu\text{m}$ repeatability on a 650 mm radius.

Built-in spindles

- Work spindle, wheel spindles and dressing rotary spindles driven by built-in motors.
- High-precision bearings with constant lifetime grease lubrication.
- Available for high rotation speeds.
- Modular designs for best application adaptability.
- Temperature control via an efficient cooling system.

VERSATILITY

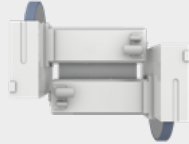
STANDARD CONFIGURATIONS



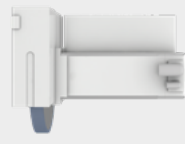
A (Angular)



B1 (Swiveling)



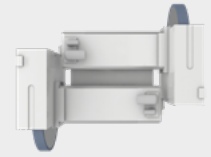
B6 (Swiveling)



S (Straight)

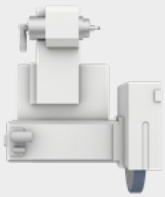


B8 (Swiveling)

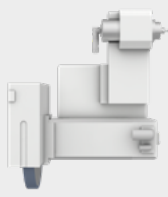


B9 (Swiveling)

SPECIAL CONFIGURATIONS



B2 (Swiveling)



B10 (Swiveling)

TURNKEY AUTOMATION SYSTEMS

Different external turnkey systems can be provided to meet specific customer requirements.



External automation systems provided with workpiece infeed or stack cell systems adapted to specific customer requirements.

- External portal for loading of parts from top hatch.
- External robot handling solutions with loading from front door, side door or top hatch.
- Workpiece infeed by chain or palletised conveyors, stack cells, etc.
- SPC and NOK part channels.
- Blowing or drying of ground parts.