

VERSATILE & HIGH-SPEED PRODUCTION GRINDING MACHINE

LG



Versatile & high-speed production grinding machine

LG

Manufacturing and precision requirements continue to become tougher. Customers are calling not just for more and better manufacturing processes, they are also looking for increased versatility and automation to help them become more competitive in the marketplace.

In response to these demands, we now present our range of LG universal grinders, a family of solutions intended for the toughest grinding work, guaranteeing flexibility and an ultimate precision, without neglecting the customization required for turnkey projects and adaptations to the specific needs of each customer.

Benefits:

- Danobat Core technology
- Complete machining of your part in just one setup
- Shortest changeover times
- Full customization
- Achieves a maximum peripheral grinding wheel speed of 27,560 sfpm
- Uses CBN, diamond, and conventional abrasives, in combination if needed

Innovative solutions

Grinding machine range

See this machine in action:



LG

Versatile and high-speed production grinding machine

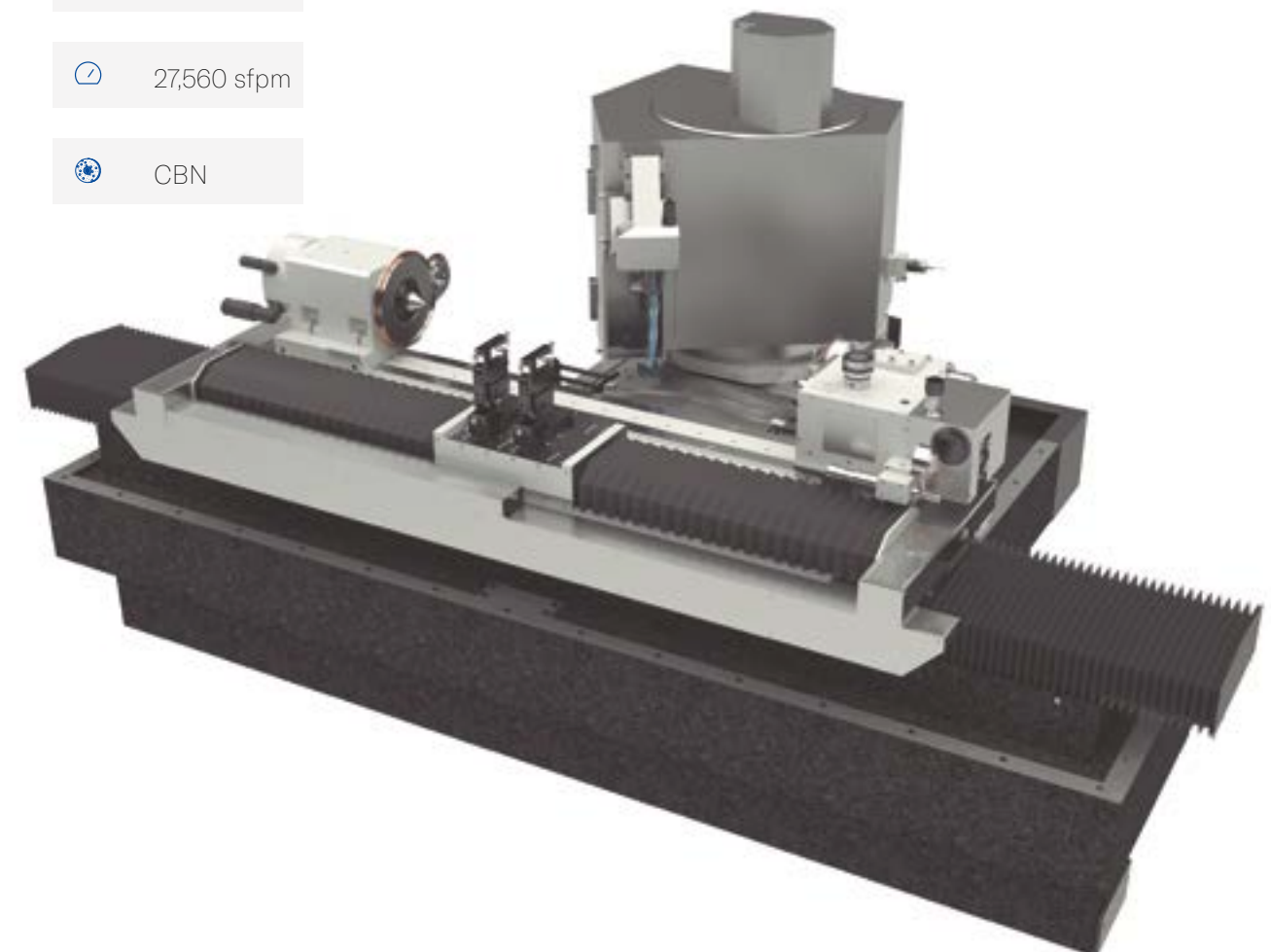
Ideal for high volume and flexible batch production

The LG universal cylindrical grinding machine has been designed to meet the most challenging production requirements. The LG is characterized by flexibility, allowing it to be customized and adapted to each customer's needs.

Features like a direct drive spindle and a wheelhead driven by a zero backlash torque motor make the LG ideal for high volume and flexible batch production.

The machine can be equipped with a number of OD and ID direct drive grinding spindles, combining conventional abrasives with CBN and/or diamond grinding wheels, using conventional speeds or high-speed grinding.

- 39.37"
- 176 lb
- 11.41"
- 27,560 sfpm
- CBN



TECHNICAL CHARACTERISTICS	LG-400	LG-600	LG-1000
Max. distance between centers	15.74 in	23.62 in	39.37 in
Max. diameter to be ground	11.41 in	11.41 in	11.41 in
Max. weight between centers	110 lb	110 lb	176 lb
Max. grinding wheel diameter	20 in	20 in	20 in
Max. wheel peripheral speed	27,560 sfpm	27,560 sfpm	27,560 sfpm

Core technology



When we talk about high production, every detail matters

Built-in spindles

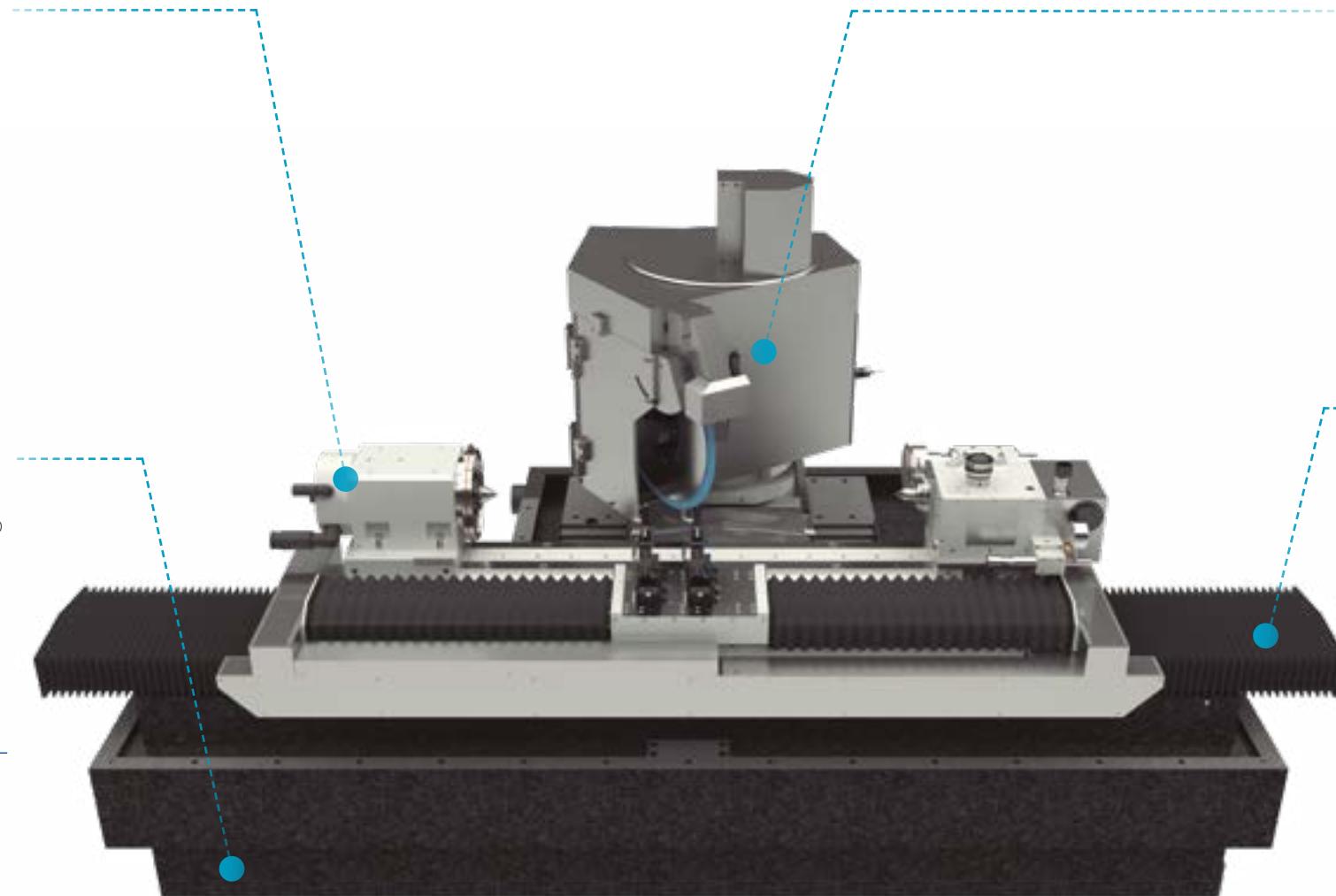
- Direct drive workhead spindle, grinding wheel spindles and dressing tool spindles
- High precision bearings with lifetime grease lubrication
- Suitable for high rotational speed requirements
- Modular, adaptable to specific customer applications
- Temperature control via an efficient cooling system

Natural granite bed

Natural granite is one of the keys for achieving the highest accuracy and the best surface quality:

- Chatter free: 5 times better damping compared to traditional materials
- 80 times less affected by temperature changes
- Coolant through the bed and grinding area
- Environmentally friendly

Main advantages	Natural granite	Synthetic granite
Thermal stability		
Dynamic stability		
Vibration absorption		



Swiveling B axis

- Infinitely programmable, high resolution swiveling B axis
- Torque motor driven for zero backlash
- High resolution rotary encoder to control perfect angular positioning
- Thanks to Danobat's B axis design with integrated, high resolution rotary encoder, the angular position is repeatable within ± 0.00004 in. measured at a radius of 25.6 in. from the center of the B axis

Linear motors

- No wear parts
- Shorter assembly and maintenance times
- Fastest axis acceleration
- High repeatability over time
- Optimized glass scale positioning

Main advantages	Linear motors	Ball screw
Precision		
Dynamic		
Maintenance-free		
Repeatability		

Innovative solutions

Software

DoGrind+: An intuitive easy-to-use software

Grinding program

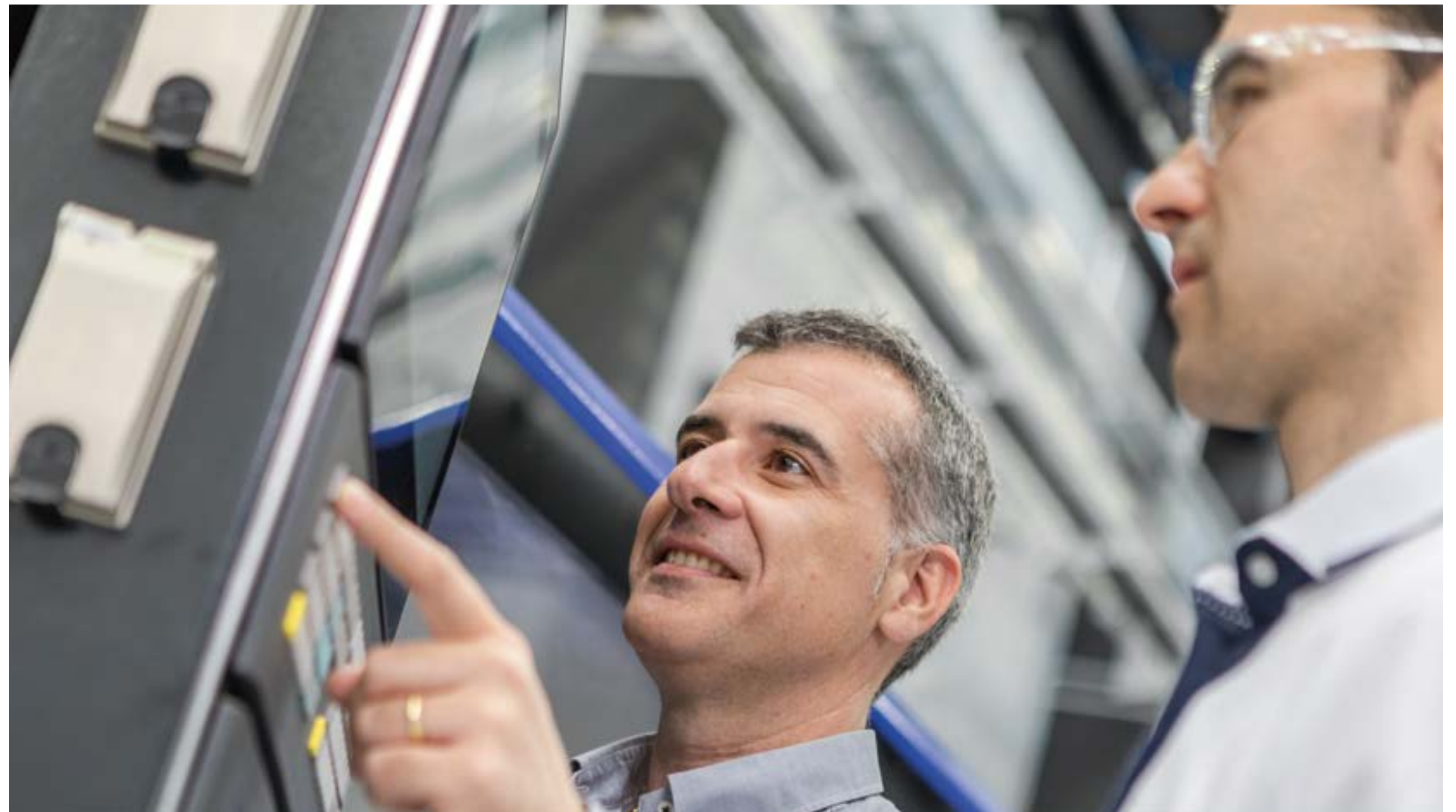
- With the simple input of the part dimensions and the material, it generates the grinding program for you
- Easily edit complex tool and part geometries

Changeovers

Optimized solutions for the fastest changeover, including automatic grinding wheel setup

Monitoring

- Total control in a single dashboard view
- Integration with ERP or external databases
- Measurement viewer app for results analysis and part traceability



Customization

More info:

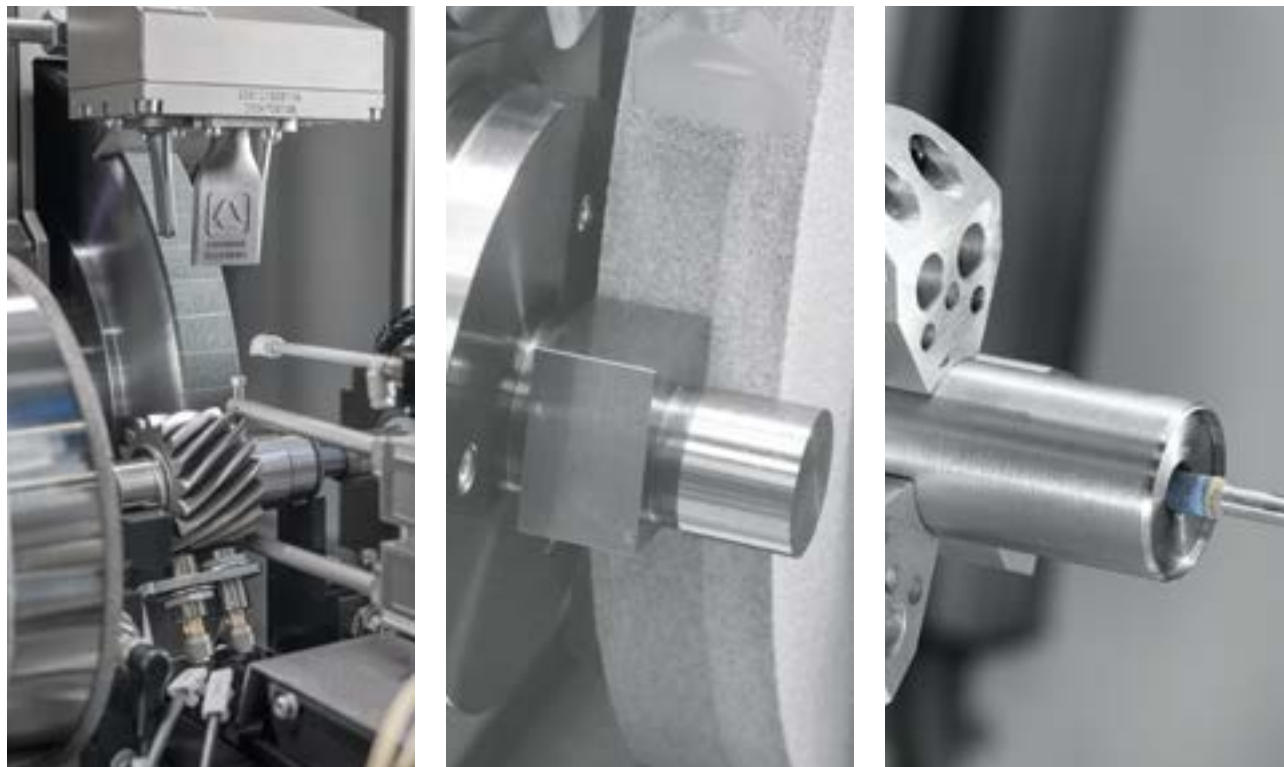


Complete machining of your part in just one setup

The LG can perform different grinding and measuring operations in a single setup, increasing the productivity of the machine.

- External diameters
- Internal diameters
- Faces
- Tapers
- Non-round shapes
- Thread

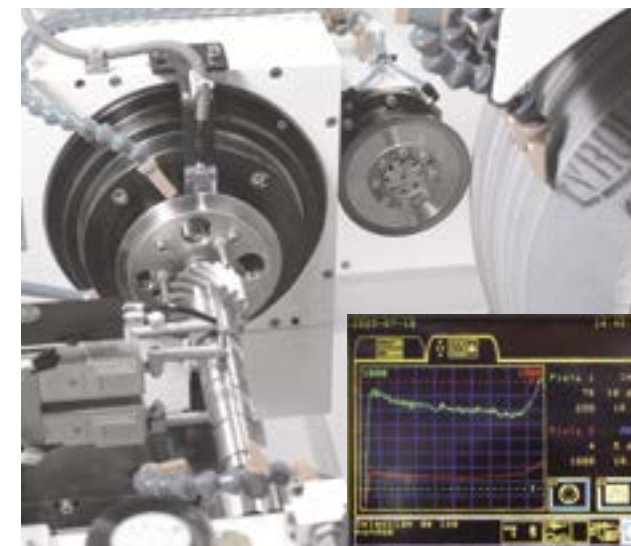
It is designed to minimize part setup, thus avoiding errors that are critical when you grind such valuable parts.



Enjoy the shortest changeover times



X and Z axes reference block for wheel touch offset reference to avoid manual setting



Auto setup cycle for dressing a new straight grinding wheel



Automatic wheel changing cycle

Customization

Customizable wheelhead

We can tailor our product to your requirements, developing and designing the optimal solution based on your specific needs.

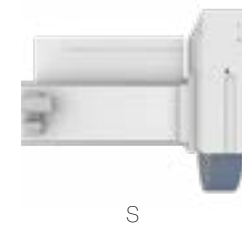
We can include:

- Touch probes
- Superfinishing
- Laser gauges
- Deburring system
- And much more



Wheelheads

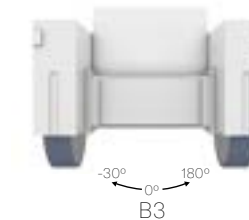
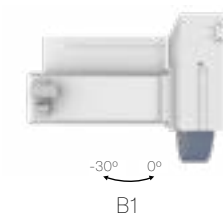
Straight



Angular



Swiveling B axis



Customization



Moving tailstock

To allow quick workpiece changeover, the LG model can be equipped with an automatic, programmable tailstock axis. The tailstock can be accurately and automatically positioned to accommodate different part lengths with no need for taper adjustments. Depending on the size of the machine model, tailstock axes with strokes of up to 15.75 in. are available. Customized solutions are possible upon request.



CNC steady rest

For long, slim components, a number of steady rest options are available.



Synchronized tailstock

Shaft-type parts requiring complete OD grinding in one setup can be driven by the friction force of centers using motorized and synchronized tailstock spindle instead of hydraulic tailstocks. The synchronized tailstock spindle is dimensioned for strokes of up to 5.9 in.. Other strokes available upon request.

In addition and for chucking applications, the synchronized tailstock can be used as a sub-spindle for grinding of parts complete, without rotating the part.



Additional axis

An additional, programmable CNC W-axis can be integrated onto the LG machine's platform and control. This additional axis, running parallel to the workpiece axis, provides an ideal mounting base for additional features and functionalities, such as steady rests, in-process measuring units, etc., to be incorporated into the grinding process, opening the world to many new possibilities and capabilities.



Integration of measuring system

The LG's high level of customizability also extends to its measuring systems, which can be mounted on the machine table, wheelhead, or even the machine bed.

We can install standard or wide-range systems, fixed or in a mobile support, touch probe, match-grinding measuring devices and even non-contact laser measuring equipment.



Automatic taper adjustment

The automatic taper correction system ensures the best results when you need to satisfy critical cylindricity specifications, or in multi-diameter single-plunge grinding.

Innovative solutions

Automation

To ensure shorter changeover times and thus increase productivity, we offer different types of integrated loading and unloading systems for LG machines.

All were developed on a modular basis at Danobat and are compact, efficient and low-cost.

Robot



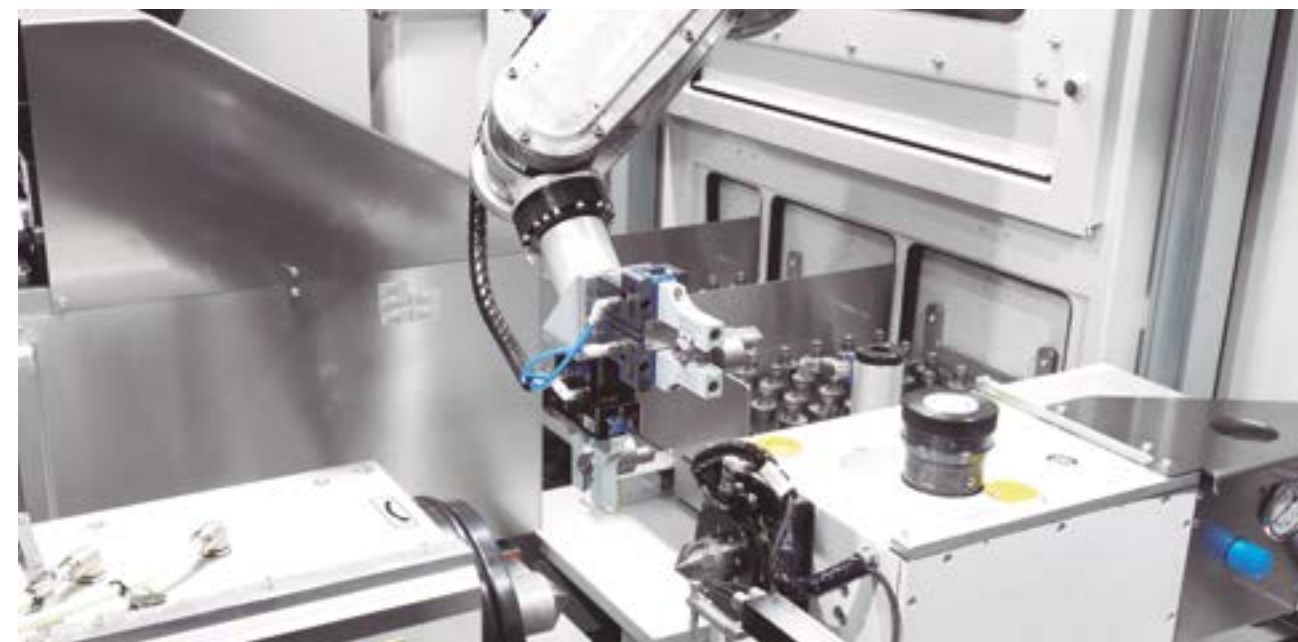
S Flexmotion
Robot inside the machine



M Flexmotion
Robot integrated in a cell coupled to the machine



L Flexmotion
Robot outside the machine



Gantry



M Motion
Gantry integrated in the machine



L Motion
Gantry outside the machine



Hybrid



M Hybrid
Combination of an integrated gantry and an external robot cell



L Hybrid
Combination of an external gantry and an external robot cell



Innovative solutions

Applications

Automotive & E-mobility



Hydraulic motors



Cutting tools



Bearings



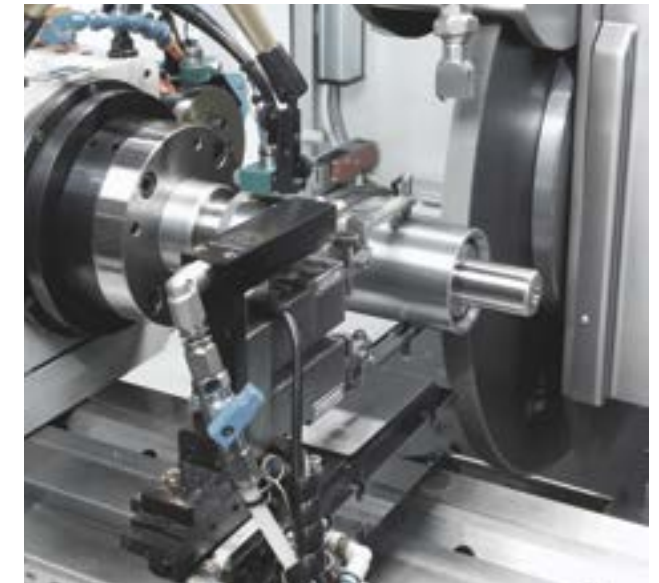
Hydraulic pumps



Yellow goods



Molds & dies





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