ADVANCED GRINDING

# Versatile & high-speed production grinding machine

LG









# INNOVATIVE SOLUTIONS FOR A BETTER FUTURE

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### 01.| MACHINE RANGE

# Blistering production rates with wheel speeds up to 120 m/s

- -For machining small to medium-sized components
- —Uses CBN, diamond, and conventional abrasives, in combination if needed
- Achieves a maximum peripheral grinding wheel speed of 120 m/s









### 01.| MACHINE RANGE

#### LG. Versatile and high-speed production grinding machine

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







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





Natural granite bed





#### 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





#### LINEAR MOTORS

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





#### **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 ±1 μm measured at a radius of 650 mm from the center of the B axis







#### **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





# **DANOBAT**

Complete machining of your part in just one set-up

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

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

It is designed to minimise part set-up and thus, avoid errors that are critical when you grind such valuable parts.



# **DANOBAT**

Enjoy the shortest changeover times



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



Automatic wheel changing cycle



Auto set-up cycle for dressing a new straight grinding wheel



Tailstock axes with strokes of up to 600 mm are available





B8 (Swiveling)



Dressing system

- Fixed dresser
- Dressing disc spindle
- o Dresser at workhead
- Roller dresser



Clamping system

- Three jaw chucks
- o Customised chucks
- Hydraulic chuck



#### Tailstock

- Manual and hydraulic tailstocks
- Synchronous tailstocks
- Taper adjustment



### Measuring system

- Touch probe
- In-process measuring
- Post-process measuring
- Non-contact measuring





#### **CNC STEADY REST**

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





#### **ADDITIONAL AXIS**

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.





#### Do you want to reduce cost per part?

We can offer you a machine including (un)loading systems, feeding or storage systems, and auxiliary stations.

#### Robotic



S FLEXMOTION Robot inside the machine

#### Gantry



M FLEXMOTION Robot integrated in a cell coupled to the machine



L FLEXMOTION Robot 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



M MOTION Gantry integrated in the machine



Gantry outside the machine

### Robotic

#### **S FLEXMOTION**

A robot inside the machine.

- (Un)loading of the feeding system is carried out inside the machine
- Built in-house
- It loads one machine





#### Robotic

### **M FLEXMOTION**

Robot integrated in a cell coupled to the machine.

- (Un)loading on the feeding system also occurs inside the cell
- Third-party system
- It loads one or more machines





#### Gantry M MOTION

Gantry integrated in the machine.

- (Un)loading of the feeding system occurs outside of the enclosure
- Built in-house or third-party system
- It loads one machine

	0
Occupied floor space	(Un)loading time
Min. Max.	Min. Max
2	55
Part size	Number of auxiliary stations
Min. Max.	Min. Max



#### Gantry L MOTION

Gantry outside the machine.

- (Un)loading of the feeding system occurs outside of the enclosure
- Built in-house or third-party system
- It loads one or more machines

Occupied floor space	Occupied floor space
Min. Max.	Min. Max.
2	5
Part size	Number of auxiliary stations
Min. Max.	Min. Max.



#### Hybrid

#### **M HYBRID**

Combination of an integrated gantry and an external robot cell.

- (Un)loading of the feeding system occurs outside of the enclosure
- Built in-house or third-party system
- It loads one machine





#### Hybrid

#### L HYBRID

Combination of an external gantry and an external robot cell.

- (Un)loading of the feeding system occurs outside of the enclosure
- Built in-house or third-party system
- It loads one or more machines









### Automotive & E-mobility





### Hydraulic motors





### Hydraulic pumps



### Cutting tools







### Bearings





### Yellow goods





### Molds & dies





ADVANCED GRINDING

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### DANOBATGROUP

