EXTERNAL AND INTERNAL GRINDING MACHINES
LIZZINI defines grinding

Wallram Grindtec is a company of ZK Holding, an international group with core competencies in sintered hard materials, ultra precision tools and precision grinding machines. Under the brand LIZZINI Wallram Grindtec develops, manufactures and sells high precision grinding machines for external, internal and non-circular as well as profile grinding. Our dedicated team of highly qualified staff ensure the quality, precision and reliability of our products - forming the sound basis of our success and long-term relationships with our business partners.

We define grinding – relentlessly and professionally
LIZZINI
lives precision

LIZZINI stands for distinctive custom-made product and service portfolios

- Precision
- Reliability
- Safety
- User-friendly
- Implementation of the latest technology

These are the foundations of LIZZINI’s optimal grinding performance.

We live precision – with each new grinding task
What we produce

Innovative grinding machines for external, internal and non-circular processing.

Modern mechanical engineering materials and visionary constructions are combined with variable B-axes, which can be fitted with several external and internal grinding spindles.

Grinding machines for excellent grinding results.

www.LIZZINI.de
LIZZINI

The customers we produce for

We develop and produce unique grinding solutions that can be ideally modified for individual part manufacturing and small and large series production in a wide range of industries, such as aviation, automotive, mechanical engineering, tool construction, medical technology, contract manufacturing companies, chemical industry, etc.

The right concept for each grinding task.
LIZZINI

What you can expect from us

Over 600 companies worldwide manufacture their products on LIZZINI machines.
This is precisely why we, at Lizzini, make sure we have contacts near you.
We have national and international sales representatives and service outlets.
We regularly showcase our new developments and machine concepts at trade shows and exhibitions.

We provide high-quality international customer service.
LIZZINI
is known for

- Modern design
- Linear technology
- SIEMENS controllers
- Mineral and granite bed
- User-friendly MICRON software
- LiViSo visualisation software
CNC GRINDING MACHINES
External – internal – unround

THE PERFECT MACHINE IN ONLY 4 STEPS

1. Electrospindle: 8 kW ø 500/600 wheel on right
   + 1 Electrospindle for internal grinding

2. Electrospindle: 8 kW ø 500 wheel on right
   + Electrospindle 8/12 kW ø 500/600 wheel on right

3. Electrospindle: 8/12 kW ø 500/600 wheel on left
   + Electrospindle: 8 kW ø 500 wheel on left for thread grinding

4. Electrospindle: 8 kW ø 500 wheel on right
   + Electrospindle: 8 kW ø 500 wheel on right for internal grinding

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CNC GRINDING MACHINES

**External – internal – unround**

- **Quill ø 50, stroke 40**
- **Quill ø 70, stroke 70**
- **Quill ø 50, stroke 70/100**
- **Quill ø 100, stroke 400/600**

**“Z3”-axis**

- Morse taper 4, ASA taper 5, circular or fixed tip
- Morse taper 4, ASA taper 5, circular tip, direct drive
- Morse taper 6, ASA taper 6, circular or fixed tip

[www.LIZZINI.de](http://www.LIZZINI.de)
## CNC EXTERNAL CIRCULAR GRINDING — INTERNAL CIRCULAR GRINDING —

<table>
<thead>
<tr>
<th>TECHNICAL DATA</th>
<th>IG FS</th>
<th>IG FM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center height</td>
<td>200 mm</td>
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<tr>
<td>Grinding length</td>
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<tr>
<td>Grinding wheels ø</td>
<td>500/600 mm</td>
<td>500/600 mm</td>
</tr>
<tr>
<td>Electrospindle power</td>
<td>8/ 12 kW</td>
<td>8/ 12 kW</td>
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<tr>
<td>Kinematic drive type</td>
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<td></td>
<td>optional linear technology</td>
<td>optional linear technology</td>
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<tr>
<td>B-axis</td>
<td>optional (torque motor)</td>
<td>optional (torque motor)</td>
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[www.LIZZINI.de](http://www.LIZZINI.de)
## OPTIONS

According to task / grinding requirement

<table>
<thead>
<tr>
<th>Longitudinal Positioner/Diameter Measuring Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balancing Systems</td>
</tr>
<tr>
<td>Dressing Roll</td>
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<tr>
<td>Steady Rests</td>
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<tr>
<td>Clamping Device</td>
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<tr>
<td>Automatic Loading-Unloading Systems</td>
</tr>
<tr>
<td>Workpiece-Dependent Accessories</td>
</tr>
<tr>
<td>Standard/Special Tools</td>
</tr>
<tr>
<td>Oil/Emulsion Coolant Systems</td>
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<td>Air Extraction Systems</td>
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### TECHNICAL DATA

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<tr>
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<th>IG FXL</th>
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<tr>
<td>Center height 200 mm / 255 mm</td>
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<tr>
<td>Grinding length 500 mm / 800 mm</td>
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<tr>
<td>Grinding wheels ø 500/600 mm / 500/600 mm</td>
<td>500/600 mm / 500/600 mm</td>
</tr>
<tr>
<td>Electro spindle power 8/ 12 kW / 8/ 12 kW</td>
<td>8/ 12 kW / 8/ 12 kW</td>
</tr>
<tr>
<td>Ball screw spindle, optional linear technology / Ball screw spindle, optional linear technology</td>
<td></td>
</tr>
<tr>
<td>optional (torque motor) / optional (torque motor)</td>
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</tbody>
</table>

www.LIZZINI.de
THE PERFECT MACHINE IN ONLY 4 STEPS

1. HF spindle, ø 100 to 170

2. 1 to 4 HF spindles in various configurations

CNC CIRCULAR GRINDING MACHINES
internal circular grinding – internal non-circular grinding – radius grinding
IG-IL

IG-IS / IG-IM

2.
Linear motor on X-axis path 300

3.
Morse taper 4, ASA taper 5 circular tip
Morse taper 6, ASA taper 6 circular tip
Direct drive

4.
B1-axis, with torque motor
Classic configuration

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### TECHNICAL DATA

<table>
<thead>
<tr>
<th></th>
<th>IG IS</th>
</tr>
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<tbody>
<tr>
<td>Center height</td>
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<td>Grinding length</td>
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<td>Grinding ø min./max.</td>
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<td>HF Spindle Power</td>
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<td>Kinematic drive type</td>
<td>Ball screw spindle, optional linear technology</td>
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<tr>
<td>B/B1-axis</td>
<td>Torque motor</td>
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</tbody>
</table>

**INTERNAL CIRCULAR**

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GRINDING MACHINES

OPTIONS
According to task / grinding requirement

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<td>3 - 25 kW</td>
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<tr>
<td>Ball screw spindle, optional linear technology</td>
<td>Ball screw spindle, optional linear technology</td>
<td>Torque motor</td>
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<td>Torque motor</td>
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www.LIZZINI.de
LIZZINI
Construction features

We offer our customers different variation options from our modular construction system. All components are designed on our high-developed CAD-systems and the CAM-manufactured parts then integrated in our machines.

We place the utmost emphasis on...
... optimum implementation of your requirements in terms of technology and cost-effectiveness
... taking into account operator and service friendliness
... compliance of the applicable safety regulations and CE standards
... selecting the supply companies in terms of quality and adherence to deadlines
... using renown brand-name products
Machine base stands

We use cast mineral composite or granite base stands as the basis for our precision grinding machines. Advantages:
- Low expansion coefficients
- Optimum vibration dampening
- No material residual stress.

Drive system

The following advantages are achieved for your production process by using linear technology:
- High traversing speed
- High positioning accuracy
- Non-wearing drive

Grinding spindle head

Optional with several external and internal grinding spindles, B-axis with torque motor. Advantages:
- Complete machining in one operation
- Grinding process optimisation
- Reduction of machining time
The two areas "grinding" and "dressing" along with their own technical specifications are required for grinding. The necessary data for this can be saved and managed using a management system on the user interface.

When creating parameter part programs, you can use over 40 different basic grinding cycles. The user can create programs with existing customer-specific technological data in a separate password-protected area.

The standard profile shapes (bevels, radius, section reinforcement) are saved in the software in the grinding wheel management. Simple dialogue entries allow you to select and create complex grinding wheel shapes without requiring you to know the ISO program.

To ensure the performance of the grinding machine, different basic setting parameters can be compared and optimised using various Siemens software and hardware tools. The "Teleservice" tool allows you to check current status information and make corrections in the application program.
**SIEMENS HARDWARE**

The SINUMERIK automation system provides exactly the right equipment package for your machine and manufacturing environment. The combination of the operator panel, PCU, a high-performance NCU matched to your requirements, a SINAMICS S120 drive and innovative motors provides you a wide range of options.

**LiViSo VISUALISATION**

**Constructing**

LiViSo combines the construction and production steps through the direct exchange of CAD data (.dxf files). In addition, a CAD program is integrated in LiViSo, which meets the high demands for manufacturing your own parts.

**Visualisation**

After creating the parts and grinding geometry, a simulation can be carried out with the desired grinding wheel and the grinding cycle can be tested and optimised. The machine-specific CNC program is automatically generated.

**Producing**

Constructing » Visualising » Optimising » Producing

You achieve your desired grinding result in only four steps and can reproduce it at any time.