

# Lean Selection speed

CYLINDRICAL GRINDING WITH SPEED



# FUNCTIONAL, EFFICIENT GRINDING



The Lean Selection speed is an extremely efficient high-speed grinding machine, perfect for grinding small and medium-sized production series in single or multiple-shift operation. When it comes to grinding shaft-type parts, including blanks for cutting tools, the Lean Selection speed is a very cost-efficient solution and is both highly flexible and efficient.

#### Highlights of the Lean Selection speed

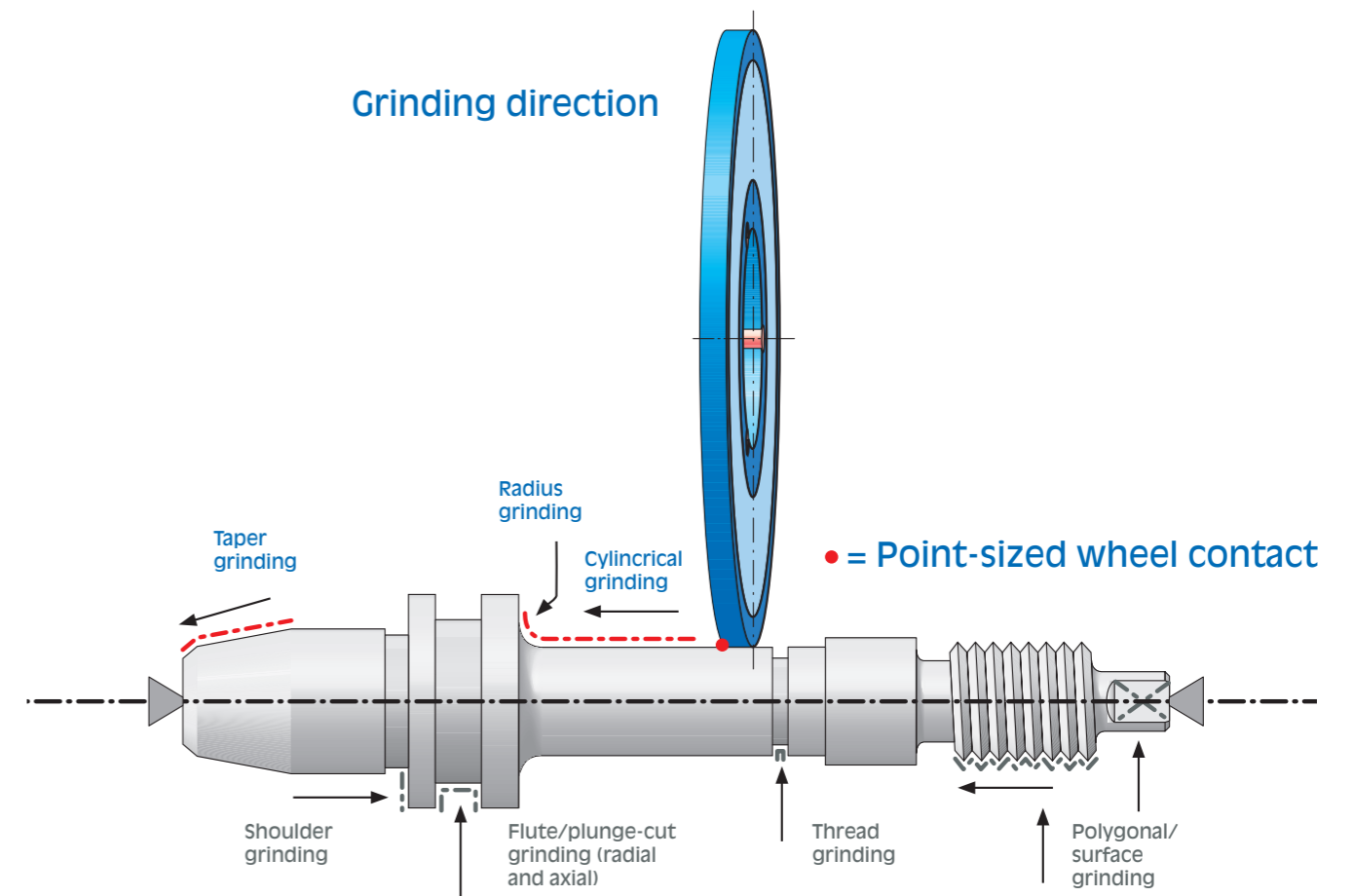
- CBN and/or diamond grinding wheels
- Peripheral speed of up to 140 m/s
- High stock removal capacity
- Fast retooling
- High rate of availability
- Minimal non-productive times
- Rigid machine base design
- Easy to operate
- Sophisticated automation concepts
- Comprehensive service package

#### LEAN SELECTION – A FULL RANGE OF STANDARD MACHINES

The efficient universal grinding machines of the JUNKER Lean Selection are ideal for manufacturing single parts and small series. This means they're perfect for contractors, small suppliers and medium-sized businesses. They can also be used for mass production. The Lean Selection grinding machines are user-friendly and built to JUNKER's high standards of product quality and precision.

#### QUICKPOINT GRINDING TECHNOLOGY

The Lean Selection speed is backed by 30 years of experience in QUICKPOINT grinding with CBN/diamond grinding wheels. The QUICKPOINT grinding method involves using just a point-sized grinding contact area for finish grinding. For this operation an extremely low-wear CBN or diamond grinding wheel just a few millimeters wide is used. By creating a relief angle, the contact zone between wheel and workpiece is reduced from a contact line to a contact point.



JUNKER QUICKPOINT grinding technology

# UNIVERSAL AND EFFICIENT

## FAST, EFFICIENT CYLINDRICAL GRINDING

- Rough and finish grinding with two grinding spindles by swiveling the B-axis
- Proven, well-engineered components
- Glass scale on the X-axis
- Workhead and grinding spindle with 3-point mounting interface
- Hydraulic tailstock with micro-fine adjustment
- Workpiece clamped between centers (with no chuck or special carriers)
- Up to two 12-kW high-frequency OD grinding spindles



Workpiece clamped between centers - no need for a clamping chuck



JUNKER standard bore: fast, easy, flexible

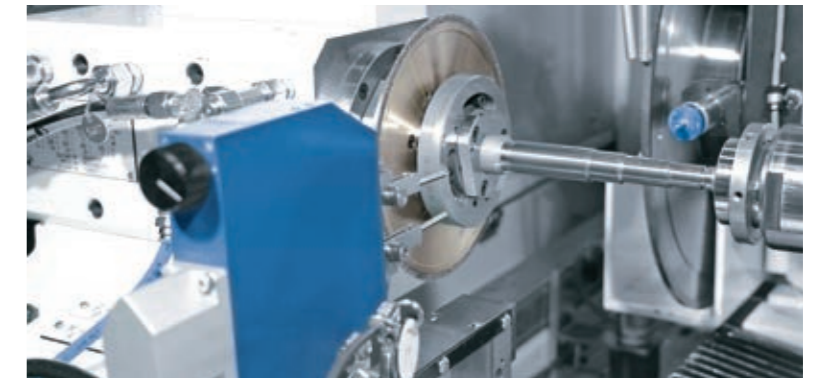
## JUNKER STANDARD BORE GUARANTEES TOP ACCURACY AND SUPER FAST TOOLING TIMES

The JUNKER standard bore is included on the wheelhead, workhead, and tailstock and makes tooling times much faster.

- Fast changeover and tooling times (under 2 min. for center points, under 20 min. for grinding wheels)
- Easy-to-mount
- Optimal centering
- Axially mounted with screwed-on grinding wheel flange, allowing changeover in rotational direction
- Concentricity 2/1000 mm

## OPTIONS AND ACCESSORIES

- Approach sensors/wheel balancing systems
- Glass scale on the Z-axis
- Diameter measuring system
- Length positioning system
- Automatic steady rests
- Clamping chuck/hydraulic chuck
- Coolant plant
- Automation system
- Teleservice connection
- Air filter unit
- Fire protection and extinguisher
- Additional options and accessories available on request



Option: Length positioning system

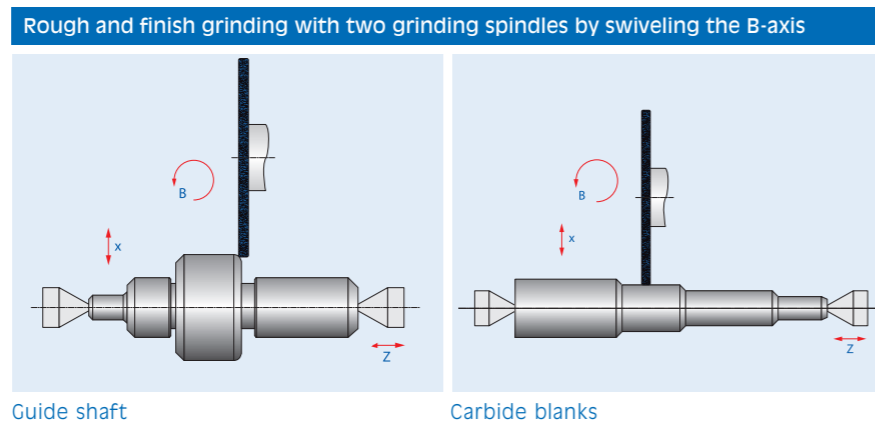


Option: sophisticated automation concepts, i.e. with JURBOT cell

**Part geometries**

The Lean Selection speed can grind the following part geometries:

- Cylindrical diameters
- Tapers and radii
- Shoulders
- Offsets and recessed portions (cylindrical grinding)



## RELIABLE FIRE PROTECTION CONCEPT - "THE JUNKER SAFETY SYSTEM"

Since the machine partly uses oil as coolant, there may be a chance of fire and explosion. The JUNKER safety system prevents damage to machines and buildings. In case of explosion, the machine interior is

automatically sealed off, preventing fire from breaking out (tested by the Institute for Safety Technology IBExU). Upon request, extinguishers (CO<sub>2</sub> or water-atomizing) can be installed additionally.



Examples of shaft-type parts

Examples of cutting tool blanks



**EASY TO OPERATE**

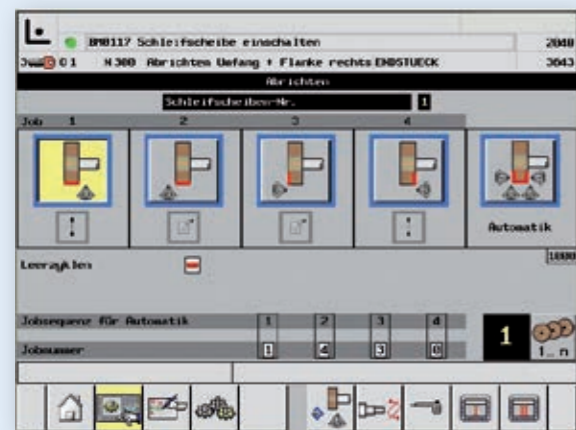
The machine comes standard with the JUWOP/R-P programming system. Alternatively, programming can also be done using the DIN/ISO system. The machine can be programmed either directly from the controls via a 15-inch touchscreen or externally from a PC or laptop.

**JUWOP/R-P – PROGRAMMING SOFTWARE FOR HIGH PRODUCTION MANUFACTURING**

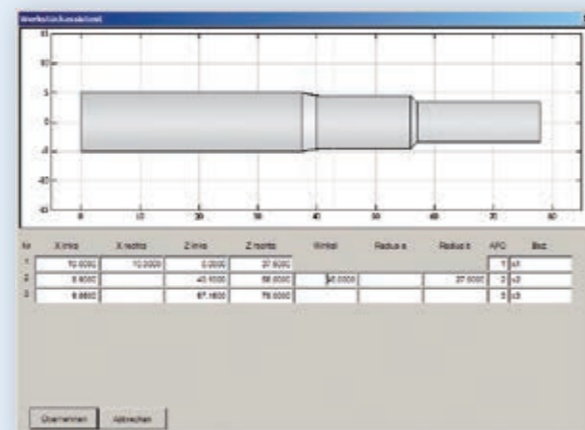
JUWOP/R-P is highly flexible software program. The operator is not limited by pre-set grinding cycles and is free to optimize the program for special operations. The grinding process can be optimized for capacity, cycle time and quality using the advanced manual adjustment options. The programmed positions are displayed to scale on the screen.

**Powerful CNC controls**

- Easy to operate
- Ergonomically designed input screens
- Graphically assisted parameter input
- Auxiliary function during data entry
- Plausibility check for entered parameters
- Multi-lingual operating guidance



Dressing options

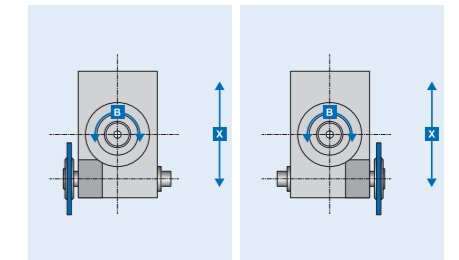


Workpiece assistant for easy programming of standard parts. A step drill blank is shown here as an example.

# TECHNICAL SPECIFICATIONS

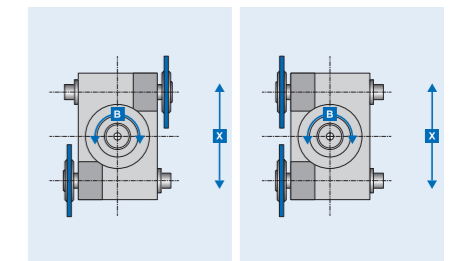
**Lean Selection speed**

<b>Workpiece specifications</b>	<ul style="list-style-type: none"> <li>• Workpiece diameter: 150 mm</li> <li>• Grinding length: 500 mm</li> <li>• Clamping length: 800 mm</li> <li>• Center height: 150 mm</li> <li>• Workpiece weight (between centers): max. 10 kg</li> </ul>
<b>Infeed axis (X-axis)</b>	<ul style="list-style-type: none"> <li>• Max. travel: 350 mm</li> <li>• Speed: 0.001 – 10 m/min</li> <li>• Resolution: 0.0001 mm</li> <li>• Direct position sensor with glass scale</li> </ul>
<b>Longitudinal axis (Z-axis)</b>	<ul style="list-style-type: none"> <li>• Max. travel: 1.000 mm</li> <li>• Speed: 0.001 – 12 m/min</li> <li>• Resolution: 0.0001 mm</li> <li>• Glass scale (optional)</li> </ul>
<b>Wheel head (B-axis)</b>	<ul style="list-style-type: none"> <li>• Swiveling range: 210°</li> <li>• B-axis resolution: 0.0001°</li> <li>• With one or, optionally, two spindles</li> </ul>
<b>OD grinding spindle</b>	<ul style="list-style-type: none"> <li>• Drive capacity: 12 kW</li> <li>• Grinding wheel diameter: 400 / 350 mm</li> <li>• Grinding wheel width: 20 mm</li> <li>• Peripheral speed: 140 m/s</li> <li>• Mounting interface: 3-point system</li> </ul>
<b>Workhead</b>	<ul style="list-style-type: none"> <li>• RPM range: 1 – 12,000 1/min</li> <li>• Mounting interface: 3-point system</li> <li>• Spindle torque: 20 Nm</li> <li>• Spindle throughbore: 30 mm</li> </ul>
<b>Tailstock</b>	<ul style="list-style-type: none"> <li>• Sleeve movement: hydraulic</li> <li>• Mounting interface: 3-point system</li> </ul>
<b>Connection load</b>	20 kVA
<b>Dimensions</b>	L x W x H: 3,340 x 2,660 x 2,325 mm (without coolant plant)
<b>Weight</b>	12,000 kg (without coolant plant)



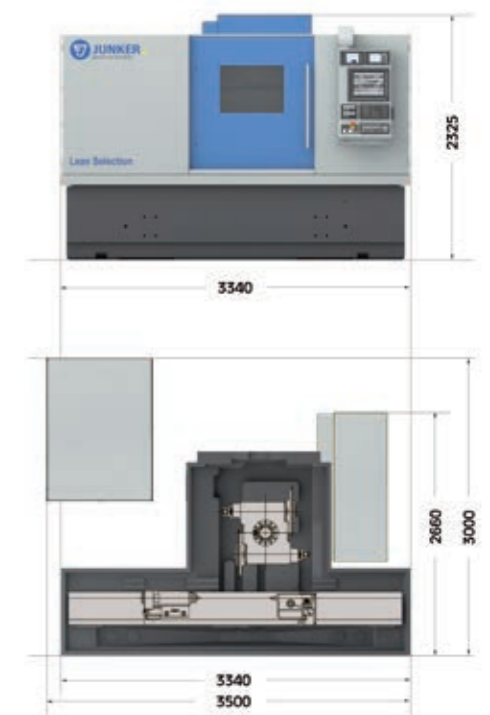
Version B1

Version B4



Version B13

Version B12



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