The compact production machine

PROFIMAT MC/RT

Key data
Whether precision, profile, internal or external cylindrical grinding – the PROFIMAT MC is a highly efficient grinding centre for any application. Equipped with the relevant accessories – such as automatic tool changer – the PROFIMAT MC is even suitable for combination machining. The PROFIMAT RT with rotary table is the perfect grinding solution for the production of large batch sizes or for series production.
Productivity, performance and precision – three attributes which users worldwide associate with surface and profile grinding machines from BLOHM and JUNG. Our machines have been in use worldwide for decades in widely varying fields of application and under very different conditions.

The experience gained from over 35,000 delivered machines is constantly incorporated into further developments and innovations, increasing our customers’ production efficiency even further. The product portfolio of Blohm Jung GmbH extends from surface grinding machines through application-oriented universal machines to customer-oriented production machines. Our service and technology specialists support our customers throughout the entire lifecycle of the machine. From grinding tests through training and maintenance contracts to retrofits, we offer our customers prompt and personal advice.

In 2008 the two established brands BLOHM and JUNG merged under one roof. Blohm Jung GmbH has thus combined its extensive know-how and constantly enables new, higher standards in the area of precision, quality and cost efficiency. There are also many opportunities for tailoring production solutions to individual customer requirements.

As part of the UNITED GRINDING Group, Blohm Jung GmbH is represented internationally with offices in India, China, Russia and the USA. A further 40 sales and service agencies guarantee a worldwide presence and customer proximity. The company’s main locations are the development and production facility in Hamburg and the service and technology center in Göppingen.
Different spindle variants enable diverse applications. The six-axis CNC profile grinding machines can be equipped with a horizontal spindle for drive capacities up to 60 kW as well as a stationary or an NC-swiveling vertical spindle. The high-performance PROFIMAT RT is the perfect production machine. Low set-up costs combined with high efficiency and the possibility of simple adaptation of automatic workpiece change systems set benchmarks in modern and cost-effective production.
Characteristics

Dimensions
- PROFIMAT MC with grinding ranges from 600 x 700 to 600 x 1,000 mm
- PROFIMAT MC with vertical spindle: Rotary table diameter up to 1,200 mm
- PROFIMAT RT with rotary indexing table diameter 1,000 mm

Hardware
- Traveling column design
- Rigid machine structure due to wide spacing of guideways
- High infeed speeds and accelerations
Software

- Siemens 840D solution line
- Safety integrated, safe axis monitoring
- Extensive operator guidance

Extremely compact in size, the PROFIMAT MC employs the latest grinding technology for flexible use in various applications. The optional tool changer and other machine-specific accessories open up broad fields of application.

Grinding spindle drives with a power of up to 60 kW and a max. cutting speed of 1 70 m/s guarantee outstanding performance using conventional, CD- or IPD as well as any CBN grinding methods.

Pre-loaded anti-friction guideways in all machine axes guarantee the necessary system rigidity and reduce maintenance requirements. The extremely efficient BLOHM software ensures exact interpolation of the axes and thus high workpiece quality.

A broad range of standard accessories and special workpiece clamping and handling systems enable quick adaptation to customized production tasks with high cost efficiency and quality.
High flexibility with a modular system

Rigid construction due to wide spacing of guideways. All models in this series feature the travel-ling column design with various configurations for stationary table, rotary table or index table, all providing the optimum solution for your grinding tasks.

Grinding spindle drive power curves

![Grinding spindle drive power curves](image_url)
Established construction principle

Z-axis with linear guideways, ground re-circulating ballscrews and linear glass measuring system

Cartridge type spindle with short taper for repeatable grinding wheel positioning

Z-axis with parallel drive system for increased rigidity (optional)

X-axis with linear guideways, ground re-circulating ballscrews
Process optimized accessories

Accessories like
- Single or double CNC indexing tables
- Integrated automatic gauging systems
- Dressing systems mounted on the machine table and/or grinding wheel head offer a wide variety of customer specific solutions.

Tool changing system

Tool changing systems with up to 24 tools permit complete machining of complex parts in one set-up using conventional and CBN grinding wheels as well as drilling and milling tools.

Tool changing systems with up to 24 tools
12 x D=300 or 8 x D=400
CNC Control

The convenient solution for profile grinding applications

Input screen for a cup wheel

Parameter input screen for the external cylindrical grinding cycle

Input screen for a dresser

Parameter input screen for the hole measuring cycle
Versions

PROFIMAT MC 607 with tool changing system

PROFIMAT RT1000

The PROFIMAT RT features an indexing table and reduces non-productive times due to loading/unloading while grinding.
PROFIMAT MC 610VS

The PROFIMAT MC 610VS has been designed for ID and/or OD grinding of rotation-symmetric workpieces up to 1,200 mm in diameter and is equipped with vertical or CNC controlled tilting grinding spindle for a wide range of applications.
BLOHM solutions

Automotive industry and suppliers

Steering racks (MC 607)

Piston rack nut (RT1000)

Turbine industry

Turbine blade (MC 607)

Stationary gas turbine blade 800 mm (MC 607)

Turbine vane segment (MC 607 VG)
Machine building

Transfer drum (MC 607)  Connecting rod for marine diesel engine (MC 610VS)

Tool and Die

Knife (RT1000)  Press break tool (RT1000)  Press break tool (MC 607)
BLOHM and JUNG surface and profile grinding machines should fulfill the customer’s requirements for as long as possible, work cost-effectively, function reliably and be available at all times. From “start up” through to “retrofit” – our Customer Care is there for you throughout the working life of your machine. 6 professional helplines and more than 25 service technicians are available in your area, wherever you are in the world.

- We will provide you with fast, uncomplicated support.
- We will help to increase your productivity.
- We work professionally, reliably and transparently.

Start up
Commissioning
Warranty extension

Qualification
Training
Production support

Prevention
Maintenance
Inspection

Service
Customer service
Customer consultation
HelpLine
Remote service

Material
Spare parts
Replacement parts
Accessories

Rebuilt
Machine overhaul
Assembly overhaul

Retrofit
Modifications
Retrofits
Machine trade-in
## Technical data

<table>
<thead>
<tr>
<th></th>
<th>PROFIMAT</th>
<th>MC 607</th>
<th>MC 610</th>
<th>MC 610 VS</th>
<th>RT 1000</th>
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<tbody>
<tr>
<td><strong>Grinding range</strong></td>
<td>mm</td>
<td>600x700</td>
<td>600x1,000</td>
<td>600x1,000</td>
<td>–</td>
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<tr>
<td><strong>Indexing table, diameter</strong></td>
<td>mm</td>
<td>–</td>
<td>–</td>
<td>600…1,200</td>
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<tr>
<td><strong>X-axis, column longitudinal travel</strong></td>
<td>mm</td>
<td>700</td>
<td>1,000</td>
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<tr>
<td><strong>Y-axis, wheel head vertical travel</strong></td>
<td>mm</td>
<td>650</td>
<td>550</td>
<td>800</td>
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<tr>
<td><strong>Z-axis, column cross travel</strong></td>
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<td>520</td>
<td>520</td>
<td>320</td>
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<td><strong>A-axis, indexer range (optional)</strong></td>
<td>deg</td>
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<td>+105/−90</td>
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<td><strong>C-axis, indexer, range (optional)</strong></td>
<td>deg</td>
<td>–</td>
<td>–</td>
<td>360</td>
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<tr>
<td><strong>E-axis, stroke of head mounted dresser (optional)</strong></td>
<td>mm</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>V-axis, stroke of head mounted dresser (optional)</strong></td>
<td>mm</td>
<td>130</td>
<td>130</td>
<td>–</td>
<td>130</td>
</tr>
<tr>
<td><strong>Grinding spindle drive power, revolution</strong></td>
<td>kW/rpm</td>
<td>–</td>
<td>–</td>
<td>bis 60/8,000</td>
<td></td>
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<tr>
<td><strong>Grinding wheel (d x w x bore), max.</strong></td>
<td>mm</td>
<td>500x200x127</td>
<td>500x200x127</td>
<td>500x100x127</td>
<td>500x200x127</td>
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<tr>
<td><strong>Dimensions</strong></td>
<td>mm</td>
<td>2,400</td>
<td>2,380</td>
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<tr>
<td><strong>width</strong></td>
<td>mm</td>
<td>4,200</td>
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<tr>
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<tr>
<td><strong>height</strong></td>
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<td>8,500</td>
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<td>9,000</td>
<td>7,000</td>
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<tr>
<td><strong>Weight (machine without electro cabinet)</strong></td>
<td>kg</td>
<td>8,500</td>
<td>7,500</td>
<td>9,000</td>
<td>7,000</td>
</tr>
</tbody>
</table>

1) Option 1,200 mm 2) Option 800 mm

We reserve the right to make technical changes.
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