

# J600

Unique precision and surface quality  
for the perfect result



## Key data

J600 – the optimal grinding machine for individual component and small batch production

Grinding range: 300 x 600 mm

The highest level of profile accuracy

“Mirror finish” surface quality

Highest flexibility

Manufactured in accordance with German quality standards



## Blohm Jung GmbH

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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.



# J600

Electronic handwheel for X-, Y- and Z-axis · Easy-Mode enables manual grinding operations in surface and plunge grinding · Grinding wheel adaptor with shorter taper · Reduced noise level for the operator · Improved reversing accuracy of the X-axis · Optimal accessibility to the work area · 1-axis rotary index table for polygon grinding · External cylindrical and non-circular grinding

# Characteristics

## Dimensions

- Grinding range: 300 x 600 mm

## Hardware

- All important elements comprise gray cast iron
- Proven cross-slide design
- X-axis with newly developed, hydrodynamic EasySlide guideway
- Complete electrical equipment and control from Siemens
- Additional, electronic handwheel in the area of the work area door for the X- and Z-axis
- Double sliding door to the work area





## Software

- Siemens 840D solution line
- Tailor-made CNC control unit for tool and die making
- User-friendly operation with high level of programming convenience
- High flexibility
- Polygon grinding
- 15" Monitor
- EasyMode



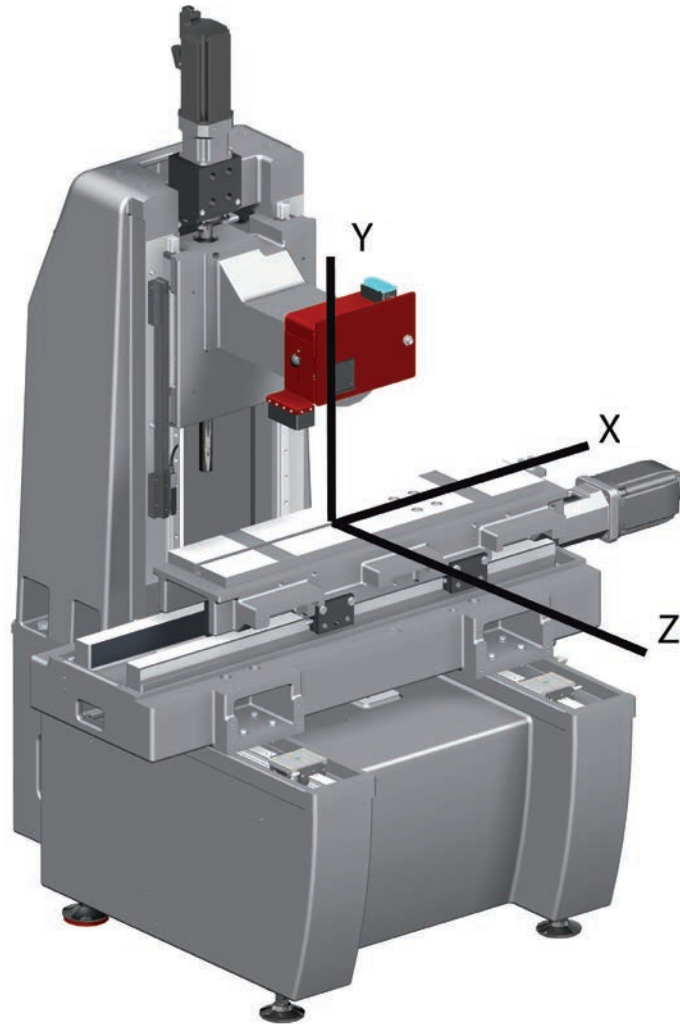
With the new J600, JUNG presents a modern surface and profile grinding machine for the highest precision and surface quality. This machine offers a host of potential applications - from individual component production through to small batch production in all industries. The J600 realizes its full potential particularly when grinding demanding applications in tool and die making.

The design principle is oriented towards a modular system, so that the J600 can be optimally tailored to individual customer requirements. The J600 owes its outstanding damping characteristics not least to the EasySlide hydrodynamic guideways in the table axis. High-precision recirculating ball-screw drives ensure high accelerations and infeed speeds.

The in Germany produced J600 offers unique ease of use. The double sliding door to the work area and additional maintenance doors guarantee optimal handling and cleaning of the machine.

In conjunction with the two handwheels, an additional highlight – Easy-Mode – enables semi-automatic, manual grinding. This function enables increased utilization.

## Established construction principle



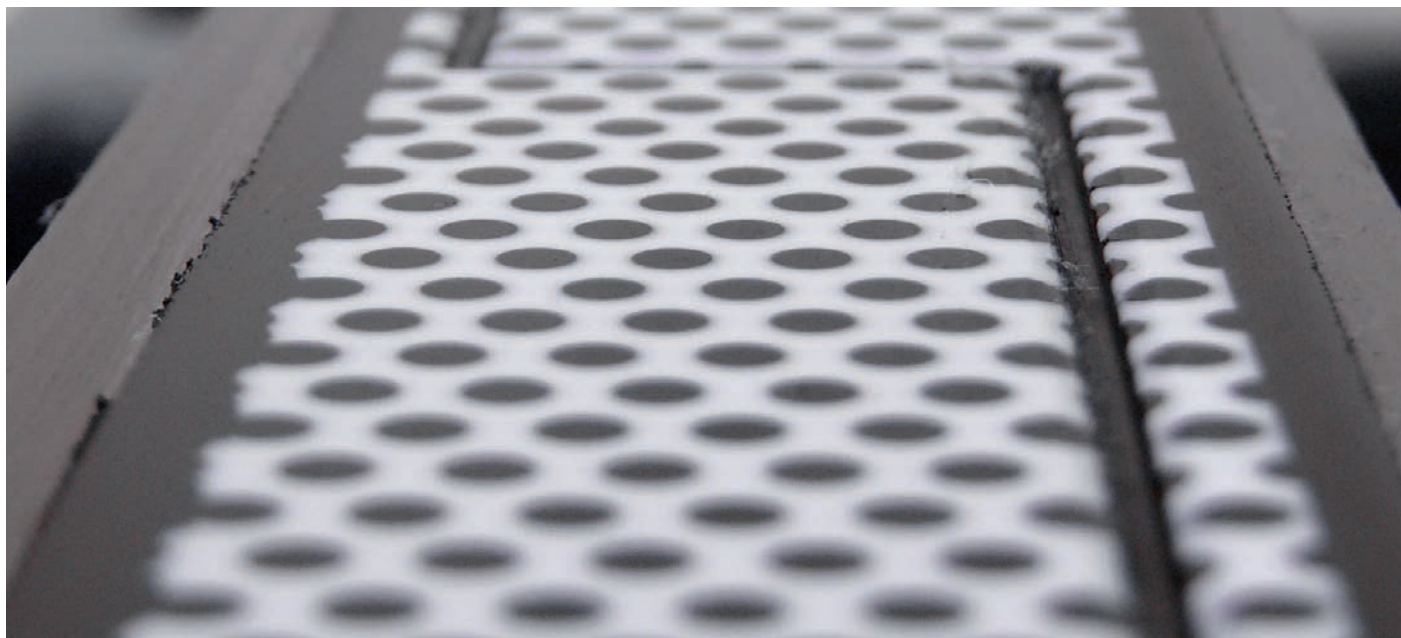
Machine bed, column, saddle, table and wheel head of the J600 are made of cast iron. Thanks to 3D-CAD and finite element analysis, we have optimized the rigidity and weight of the machine.

The machine's cross-slide design ensures a consistent position of the grinding wheel to the grinding head vertical guide and direct absorption of the grinding forces by the cross-slide and table guideways. High-precision re-circulating ball-screws are also installed in all three axes. All electrical equipment and control systems of the J600 are manufactured by Siemens.

The design principle of the J600 offers a number of further advantages:

- Grinding range: 300 x 600 mm
- Double sliding door for optimal accessibility to the work area
- Additional maintenance doors guarantee optimal handling and cleaning of the machine
- Additional electronic handwheel in the area of the workarea for X- and Z-axis
- 1-axis rotary index table for polygon grinding

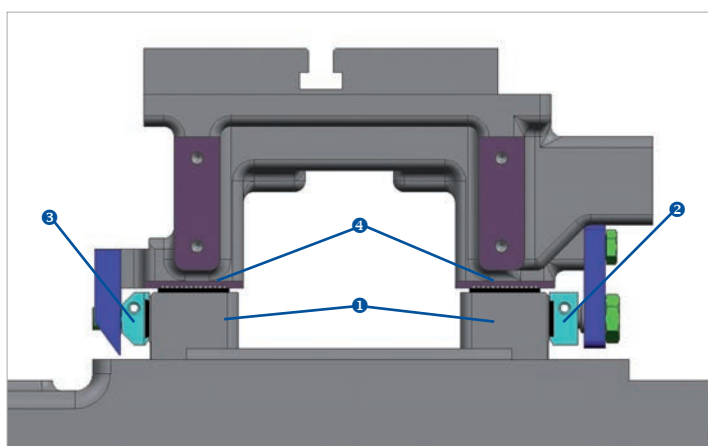
## New and conclusive – the guideway principle EasySlide



Optimal dampening and maximum smoothness increase the precision of the grinding process. To achieve this, the J600 is equipped with scraped guideways in the X-axis and the guides on the table base with the new EasySlide coating. As a result your parts receive a very high surface finish quality. The new wear resistant composite EasySlide coating on the lateral guides and on the table base ensures utmost running smoothness, increased precision and high surface finish quality.

### Key advantages

- EasySlide guideways with very high wear resistance
- Lateral guidance by preloaded, externally mounted guides
- Separation of load and guiding plane
- Increased smoothness and precision
- Exceptionally high surface quality of workpieces



- ❶ Guideway support
- ❷ Lateral table guide, fixed side with EasySlide coating
- ❸ Lateral table guide, moveable side with EasySlide coating
- ❹ Sliding coating on table



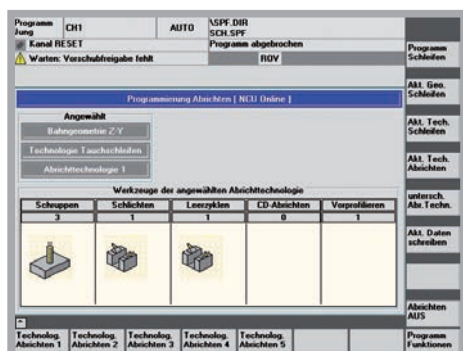
# CNC control – tailor-made for the tool and die industry



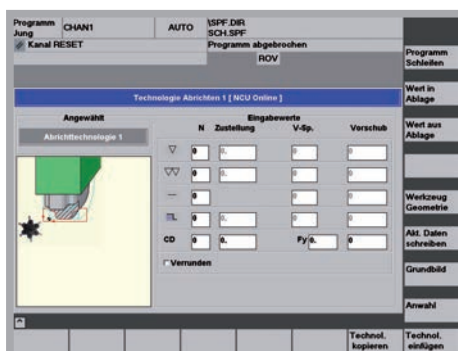
## Key advantages

- 15" monitor
- User friendly with comfortable programming functions
- Simple set-up of machine and parameter, also with the portable control unit
- Quick adaptation of grinding and dressing cycles with graphical support
- Praxis orientated software upgrades to increase the productivity
- Maximum control flexibility
- Many different parameterizing options during the machining process

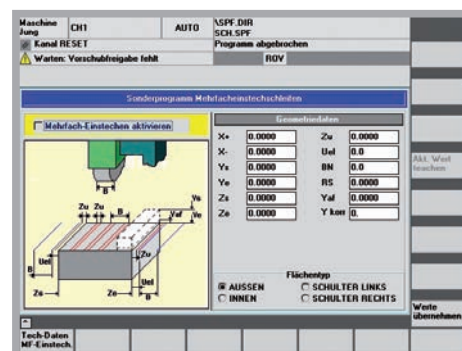




Tools for the selected dressing technology



Input window for the dressing parameters (PA37K)



Special program - multiple plunge grinding

The J600 control is a combination of the proven Siemens 840D solution line and program cycles especially developed for the tool and die industry by JUNG.

This combination makes the J600 specialist to solve difficult grinding tasks economically and flexibly. The typical requirements, such as "quick start reciprocate grinding programs" are already integrated. Program sequences

can be quickly and easily adapted to the needs of your grinding application.

Efficient operation is ensured by conversational menu with graphical operator guidance and the pre-programmed keys (soft keys), e.g. for quick positioning, for moving to the loading, wheel change or dressing position – if needed you can simply switch to the conventional grinding mode programming while the machine is in operation

and the program input and output via the integrated USB interface is also possible. Program sequences can be interrupted at any point and the machine will automatically retract and get back to the last position, e.g. inspection of the part. Operated by keyboard, mouse or through the portable control unit.

## Productivity-enhancing software extensions

### GripsProfile:

- 13 standard contours
- Import of dxf-files
- Contour program generation
- Simulation

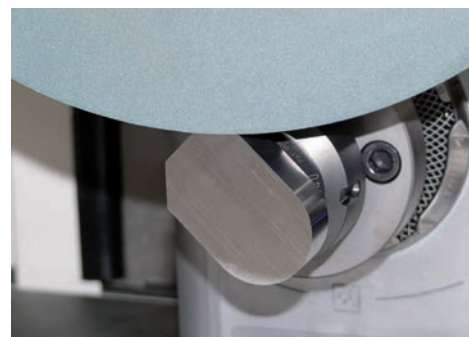
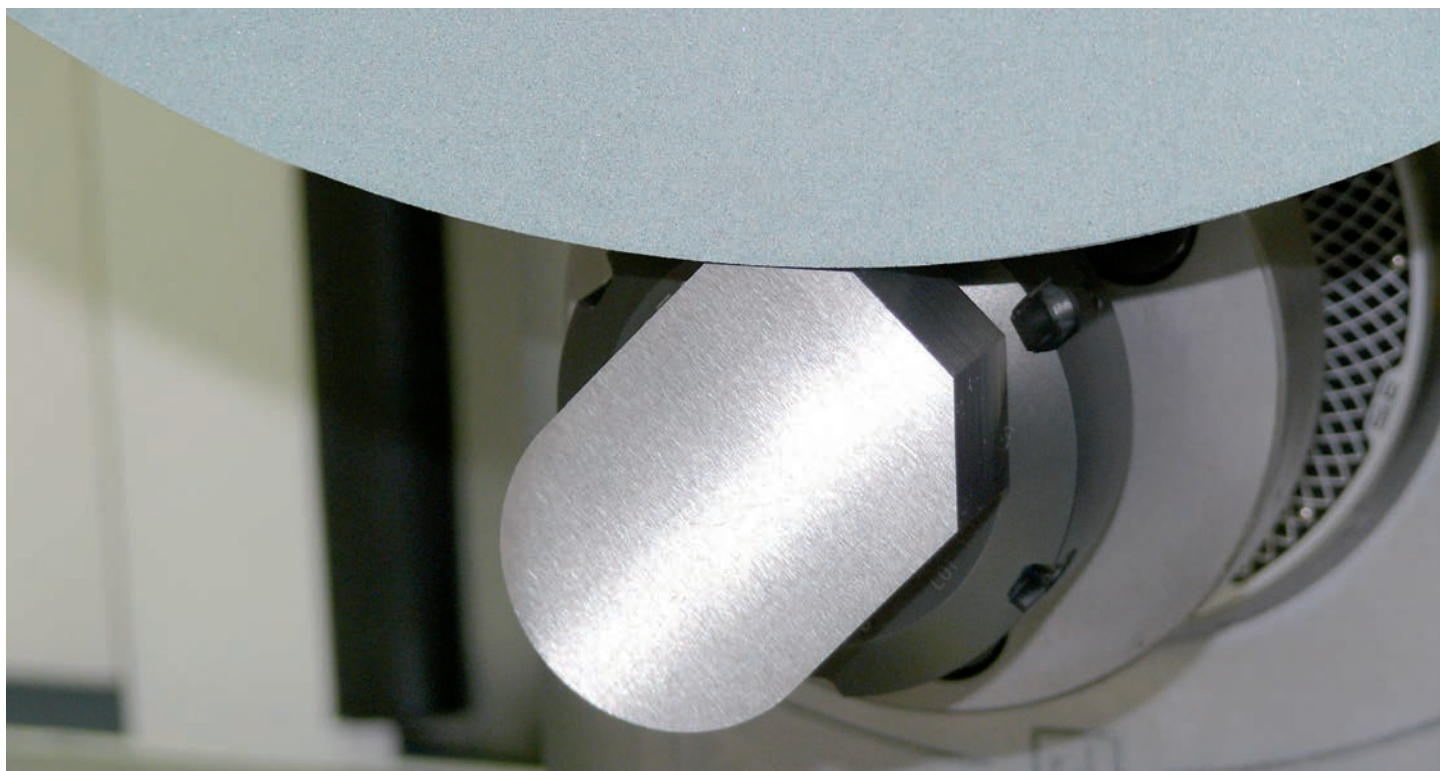
### Optional grinding cycles:

- Contour dressing
- CD dressing
- Creep feed grinding with AC control
- Roughing operation
- Plunge grinding
- Contour grinding Z/Y and X/Y
- Z-axis cross positioning
- Face grinding
- Punch grinding with base

### Optional programs:

- Machine-warm-up/switch-off program
- Program linkage
- GripsProfile
- CAD-module for GripsProfile
- GripsProfile light
- Tool management

# Polygon grinding



## Reduced machining times

The new polygon grinding software enables grinding of 360° contours on the J600 in a single clamping. For this function the J600 can be equipped with a rotary index table (optionally with tailstock).

## Also external cylindrical and noncircular grinding

Any external contour consisting of line and circular elements can be ground on the J600 with polygon grinding. External cylindrical grinding and noncircular grinding tasks can also be performed with the highest precision and surface quality.

## Highest flexibility and wide variety of workpieces

The set-up of a new grinding process on the J600 is very easy: the user simply generates the two-dimensional contour of the workpiece in CAD and imports it into the program. All further steps are performed automatically. The machine operator does not need any programming knowledge, as the grinding program converts the data into the third dimension completely automatically. The operator then only needs to select the technology parameters.



## J600 Applications



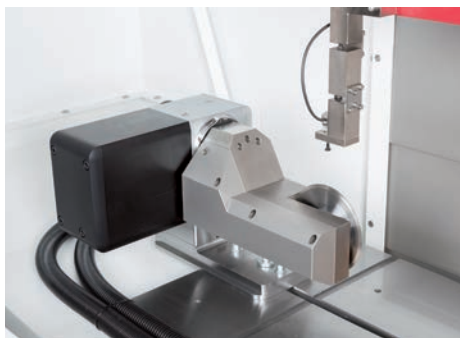
## Dressing attachments – highest flexibility for economic manufacturing



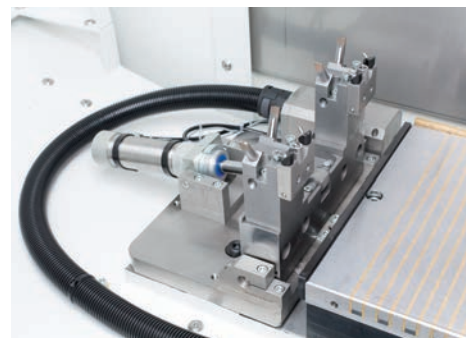
**Table mounted dresser PA-TLR28**



**Diamond holder** with exchangeable inserts (90, 150, 300 mm) for efficient circumferential and face dressing as well as calibrating.



**Articulating dressing attachment PA-T130** continuous path controlled dressing by means of using the machine axes (Y and Z) and the CNC controlled articulating axis of the dresser. Electronic measuring device with stand, probe and calibration ball.



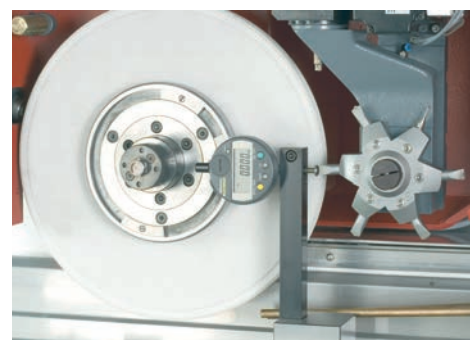
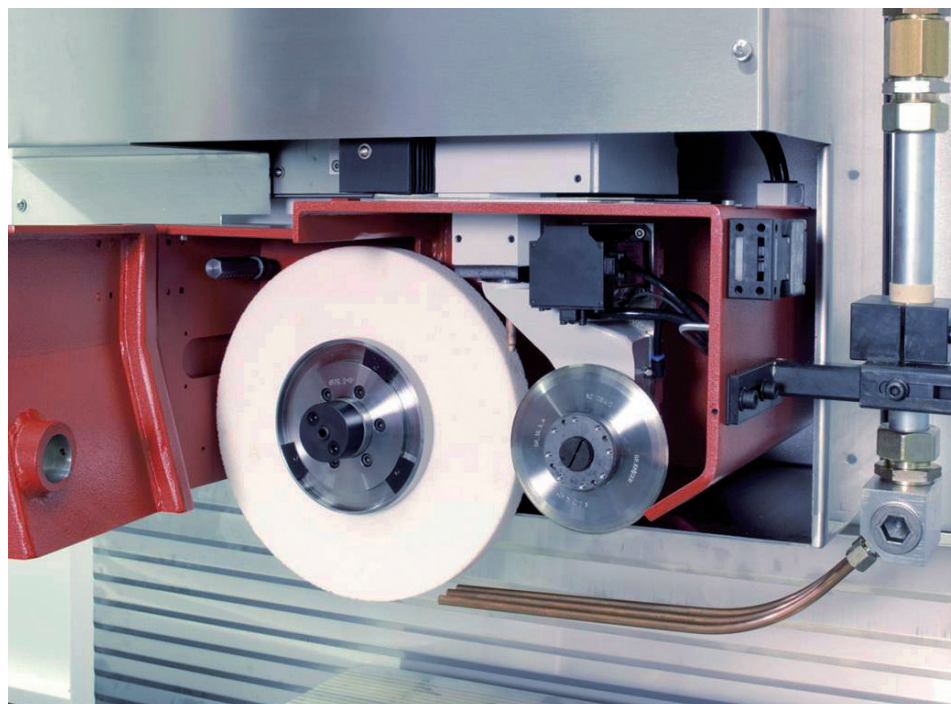
**Folding dresser** for peripheral, lateral and profile dressing. Pneumatic actuation prevents grinding wheel and protective hood from colliding with the dresser.



# Wheel head mounted dresser PA-K37

CNC controlled 4-axis dresser from JUNG

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## Precision

- High-precision, direct axis drives with 0.1 µm resolution

## Operation

JUNG GripsProfile programming system for

- Workpiece profile geometry creation
- Collision and feasibility checks
- CAD/CAM integration

## Flexibility

- 6x toolholder for profile diamonds, or alternatively toolholder for rotating diamond dressing disc
- Quick-change system for toolholders

## Productivity

- Continuous dressing of the grinding wheel during machining

## Performance

- Automatic setting-up and gauging of tools on the machine
- Integrated tool management

## Production reliability

- Overhead arrangement prevents collisions with workholders/fixtures in the working area

## Cost effectiveness

- Longer dressing tool life
- Maximum precision in unmanned operation

# Customer Care

BLOHM and JUNG surface and profile grinding machines should fulfill the customers 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.
- We will provide a professional solution to your problems.

**Start up**

Commissioning  
Warranty extension

**Qualification**

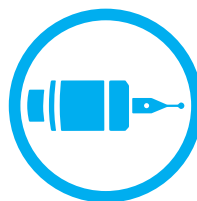
Training  
Production support

**Prevention**

Maintenance  
Inspection

**Service**

Customer service  
Customer consultation  
HelpLine  
Remote service

**Material**

Spare parts  
Replacement parts  
Accessories

**Rebuilt**

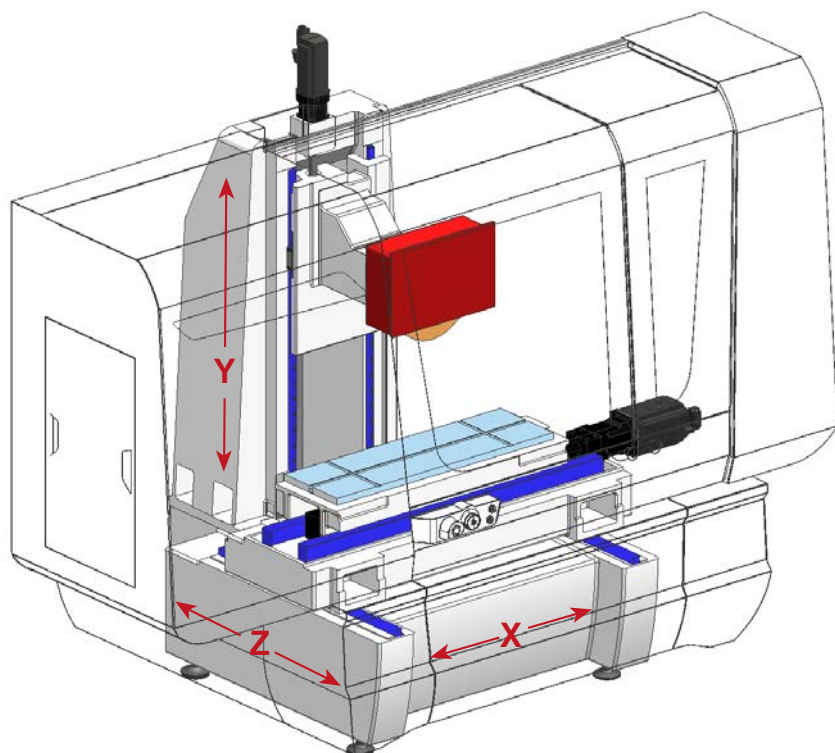
Machine overhaul  
Assembly overhaul

**Retrofit**

Modifications  
Retrofits  
Machine trade-in



# Technical data



## J600

Grinding range	mm	300 x 600
Magnetic chuck	mm	300 x 600
Table clamping area with auxiliary surface	mm	300 x 1,000
Distance table to spindle center	mm	130...580
Table load with magnetic chuck, max.	kg	400
Table height above floor	mm	925
X-axis, longitudinal travel, max.	mm	700
Feed rate	mm/min	30...50,000
Y-axis, wheel head vertical travel, max.	mm	450
Feed rate	mm/min	4...3,750
Z-axis, saddle cross travel, max.	mm	345
Feed rate	mm/min	4...4,000
Grinding spindle drive, variable speed, AC-motor	kW/rpm	8,5/1,500
Speed, max.	1/min	5,000
Grinding wheel (d x w x bore)	mm	150...300 x 14...50 x 76.2
Dimensions width	mm	3,360
depth, incl electrical cabinet, without operator panel	mm	2,410
height	mm	2,500
Weight, incl. electrical cabinet	kg	4,500
Short stroke reciprocating (no. of strokes per time)	330/min at 15mm length of stroke	

We reserve the right to make technical changes



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