

# JE600/JE800

The guarantee of flexibility and versatility  
in your production



## Key data

Grinding range 300 x 600 mm and 400 x 800 mm

From individual component through to small batch production

X-axis with hydrodynamic EasySlide guideways

EasyProfile control

Outstanding thermal and vibration engineering characteristics

Electronic handwheel for all three axes

# JE600 JE800

## Blohm Jung GmbH

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.

EasyProfile control system for intuitive operation without NC knowledge · Fixed programs for workshop-compliant handling, combined with a quick adaptation of dressing and grinding cycles through parameters · Reduced noise level for the operator · Improved reversing accuracy of the X-axis · Optimal accessibility to the work area · Quick and easy set-up · High grinding precision for best surface quality



# Characteristics

## Dimensions

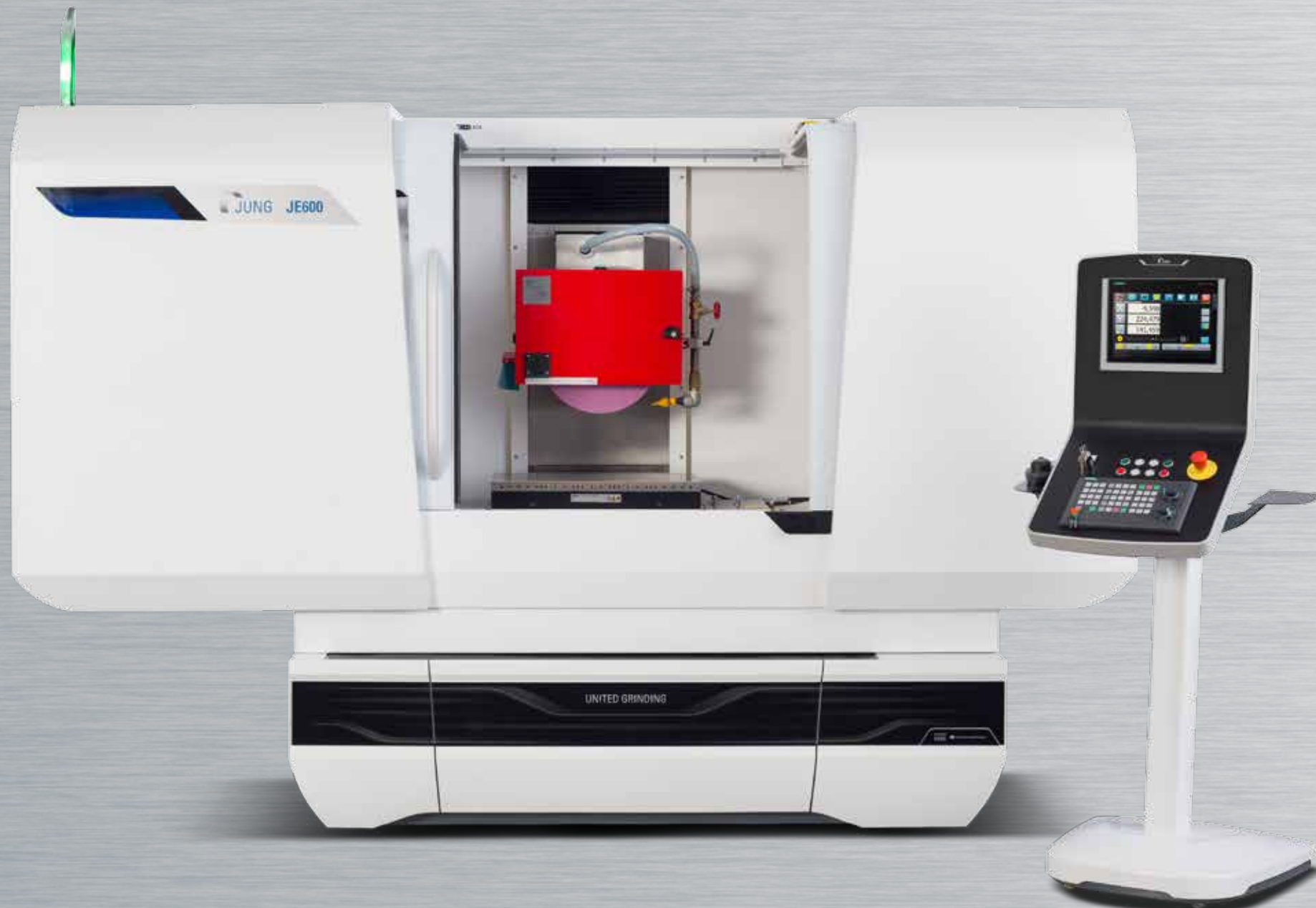
- Grinding range: 300 x 600 mm and 400 x 800 mm

## Hardware

- All important elements comprise gray cast iron
- Proven cross-slide design
- X-axis with newly developed, hydrodynamic EasySlide guideway
- Generous work area with large door
- Grinding wheel adaptor with short taper (Zero-Point-System)

## Software

- EasyProfile control combined with proven Siemens 840D solution line
- Intuitive operation
- Quick adaptation of dressing and grinding cycles through parameters with graphic support
- Control panel on rollers, free-standing, on the right-hand side of the machine
- Manual control unit with electronic handwheel and keys for conventional operation of all axes
- Productivity-enhancing software extensions
- 12" touch screen color display



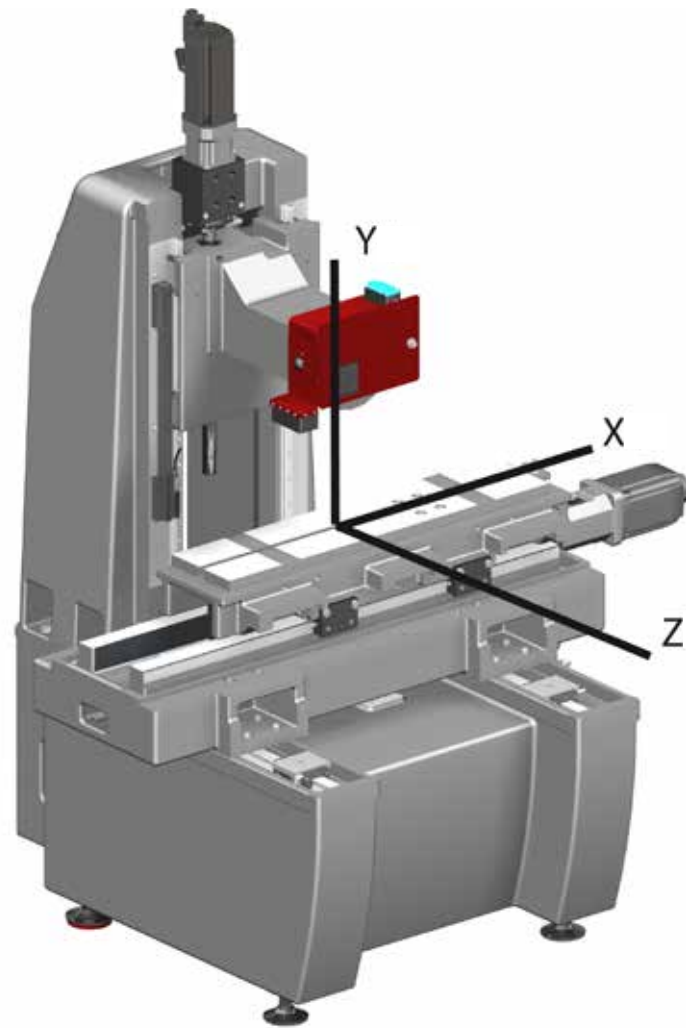
With the new JE-series, JUNG presents modern surface and profile grinding machines for the highest precision and surface quality. Even the basic machine version covers a wide variety of potential applications. From simple, conventional surface grinding with handwheel, through to automatic profile grinding - all requirements can be met with the EasyProfile control system.

The design principle is oriented towards a modular system, so that the JE600 and JE800 can be optimally tailored to individual customer requirements. The machines owe their 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 EasyProfile control of the JE-machines offers unique ease of use. The large sliding door to the work area and additional maintenance doors guarantee optimal handling and cleaning of the machine.



## Established construction principle



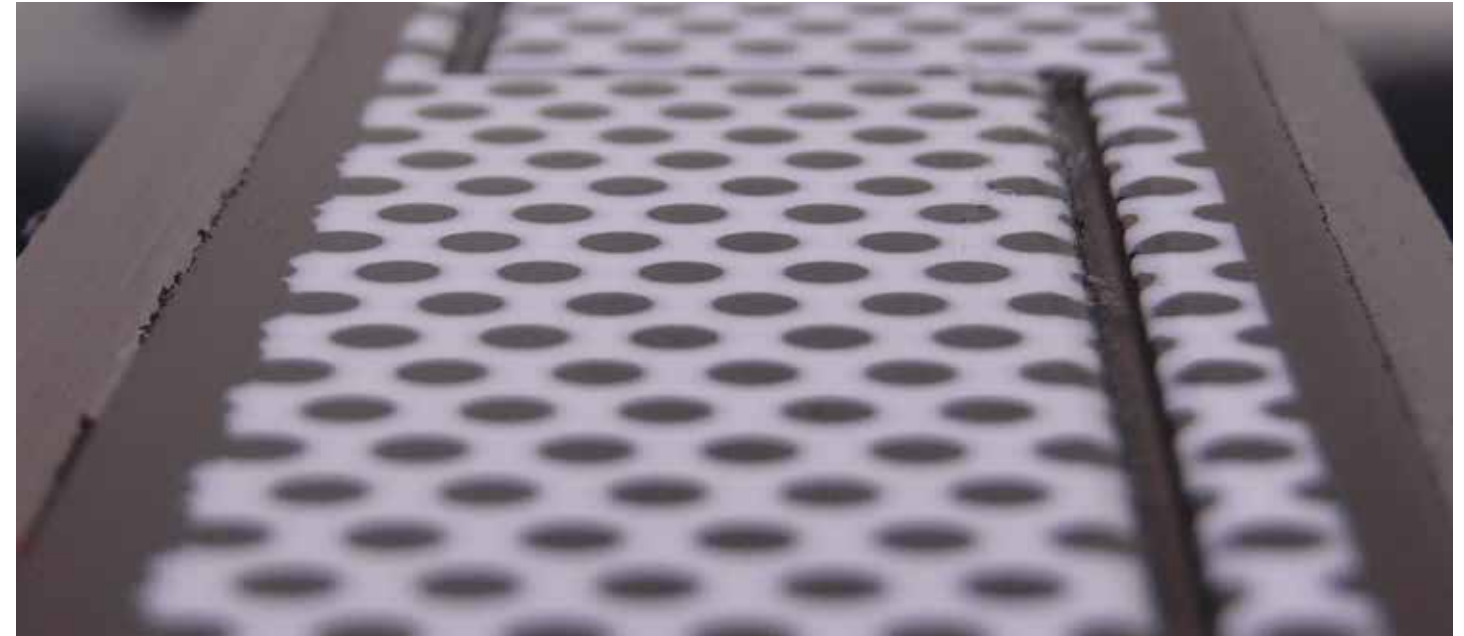
Machine bed, column, saddle, table and wheel head of the JE-series are made of cast iron. Thanks to 3D-CAD and finite element analysis, we have optimized the rigidity and weight of the machines.

The machines' 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 JE600 and JE800 are manufactured by Siemens.

The design principle of the JE-series offers a number of further advantages:

- Large sliding door for optimal accessibility to the work area
- Set-up mode possible with open sliding door and oscillating X-axis
- Maintenance doors for better cleaning of the work area
- Manual control unit with electronic handwheel and keys for manual operation of all axes
- The basic version has a grinding wheel adapter with short taper (Zero-Point-System)

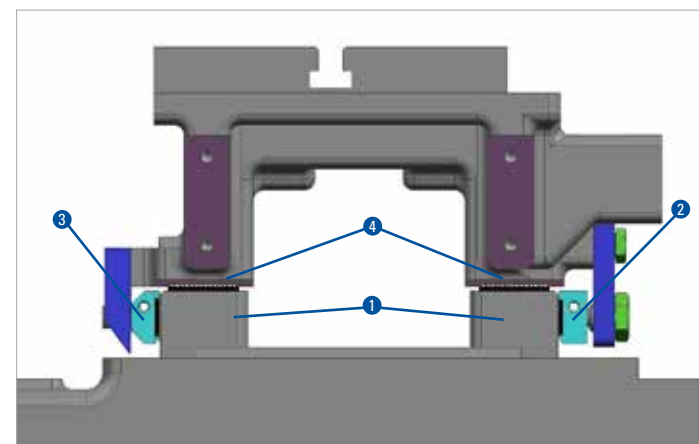
## Reliable and conclusive – the guideway principle EasySlide



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



- ① Guideway support
- ② Lateral table guide, fixed side with EasySlide coating
- ③ Lateral table guide, moveable side with EasySlide coating
- ④ Sliding coating on table

# Machine operation made easy – the EasyProfile control

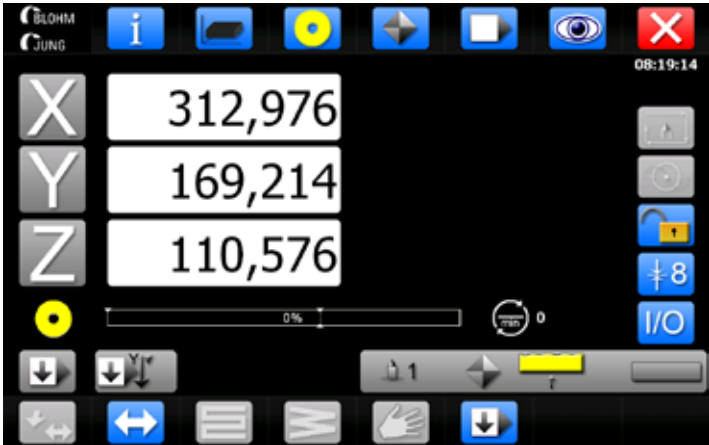


The EasyProfile control is the result of close cooperation between the Blohm Jung GmbH and Siemens and combines the proven Siemens 840D solution line hardware with the innovative user interface developed by BLOHM. The clear, menudriven operation via a color touch screen is intuitive and simple.

With the EasyProfile control system you can utilize the capacity of the JE machines to the fullest extent and increase your long-term productivity.

## Key advantages

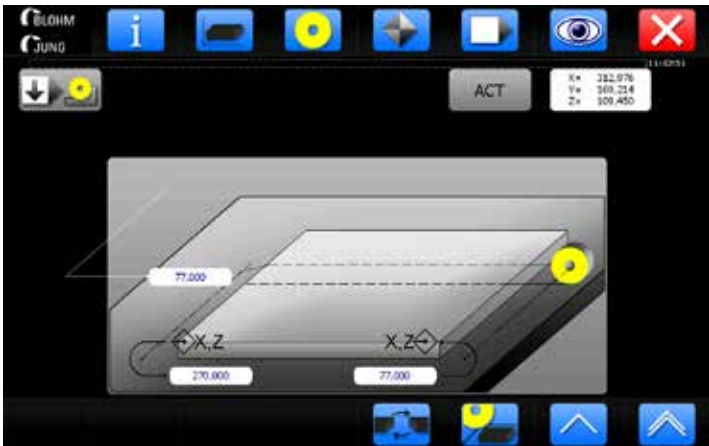
- Touch-screen TFT-color display
- Optimal: intuitive operation and comfortable programming of grinding and dressing cycles
- No NC-programming knowledge required
- Ease of machine set-up with portable control unit
- Quick adaptation of dressing and grinding parameter due to graphical support
- Productivity increasing software upgrades



Standard screen



3 layer automatic grinding cycle: roughing, semi-finishing, finishing, spark-out with integrated dressing cycles. Only a few parameters are required to complete the cycle.



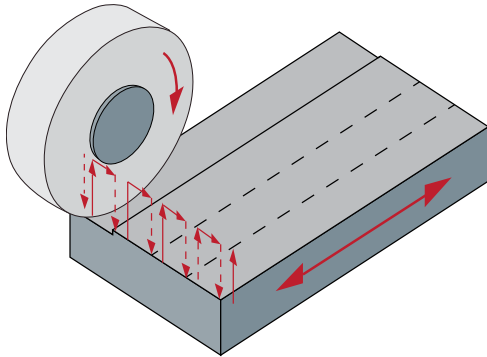
Simple definition of workpiece dimensions

## The scope of delivery includes the following canned cycles:

- Reciprocate plunge grinding
- Surface grinding with intermittent or continuous cross feed
- Input of a stock amount or finish dimension
- 3 layer automatic grinding cycle with ECO-roughing function
- Plunge or surface grinding with manual infeed
- Creep feed grinding cycle
- Recessing of grinding wheel flanks

Dressing cycles are started automatically by the program, via stroke counter or manually via push button.

Additionally, the dressing system ADC (Adaptive Dressing Control) is available. The dressing cycle is started automatically when the power consumption of the grinding spindle drive increases due to the loading of the grinding wheel reaching a pre-selected value.



ECO-roughing cycle: guaranteed time savings through optimized strokes

# Increase your grinding results with EasyProfile upgrades

## Software package 1 – Additional grinding cycles



Multi-step grinding program

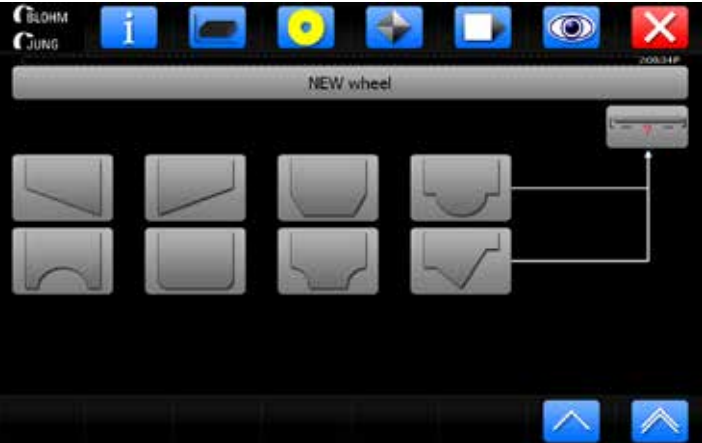
This software package includes grinding cycles for automatic step grinding, rotary table surface grinding and automatic gap control.

The **multi-step grinding program** permits grinding of up to 10 different grinding planes in one set-up. The Y- and Z-starting position, working parameters for roughing, finishing, dressing, re-positioning in Y-direction for each plane are individually programmable.

**Grinding program for rotary table** – surface grinding by means of oscillation of the Z-axis with positioned X-axis and automatic infeed in Y-direction.

**Automatic gap control** to reduce air-grinding time for workpiece with varying stock. The air gap between grinding wheel and workpiece will be eliminated by a high infeed. When the grinding wheel touches the workpiece the rapid infeed is changed to normal grinding infeed.

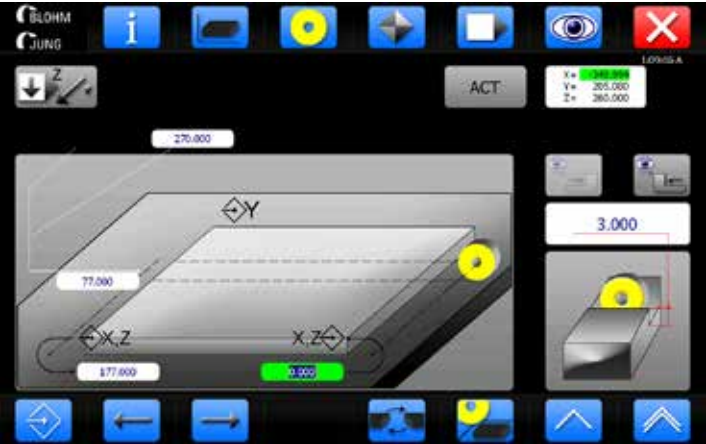
## Software package 2 – Profile dressing and profile grinding



Pre-defined contours for selection and individual adaptation

Expand the scope of EasyProfile control to permit the profile grinding applications. 8 different dressing contours are available which are easily defined by parametric inputs via the touch screen. If the edited values do not generate a continuous contour it is recognized by the control and an error message “contour error” is displayed. The grinding wheel profile will be generated by means of continuous path controlled dressing including rapid layer by layer pre-profiling cycle. Dressing of the wheel takes place by table mounted dressing attachments.

## Software package 3 – Face grinding and calibrating



Face grinding

**Face grinding:** grinding of vertical surfaces by means of reciprocate face grinding. Infeed takes place at reversal point. According to the location of the surface the front or rear wheel flank will be used.

**Calibrating:** initial and subsequent calibrating of grinding wheel flanks with diamond blades or calibrating rolls.

## Software package 4 - Grinding wheel management



Grinding wheel management

Short change overtimes can be achieved by grinding wheel management for a maximum of 24 wheels. All process relevant grinding wheel data can be stored in the control before the wheel is taken off the machine. The wheel marked with name/number is stored outside the machine. Once the wheel is remounted, the wheel identification is entered into the wheel management of the control and the stored data, i.e. actual wheel diameter, wheel width and profile definition are activated and displayed. The machine is immediately available for re-profiling of the grinding wheel.



## Dressing attachments – highest flexibility for economic manufacturing



**PA-TL28** for surface grinding and grinding of standard profiles with small radii and high accuracies. Overhung-mounted, fixed dressing wheel with adjustable angular position.



**Folding dresser** for peripheral, lateral and profile dressing. Grinding wheel and protective hood cannot collide with the dresser. A roughing and a finishing station.

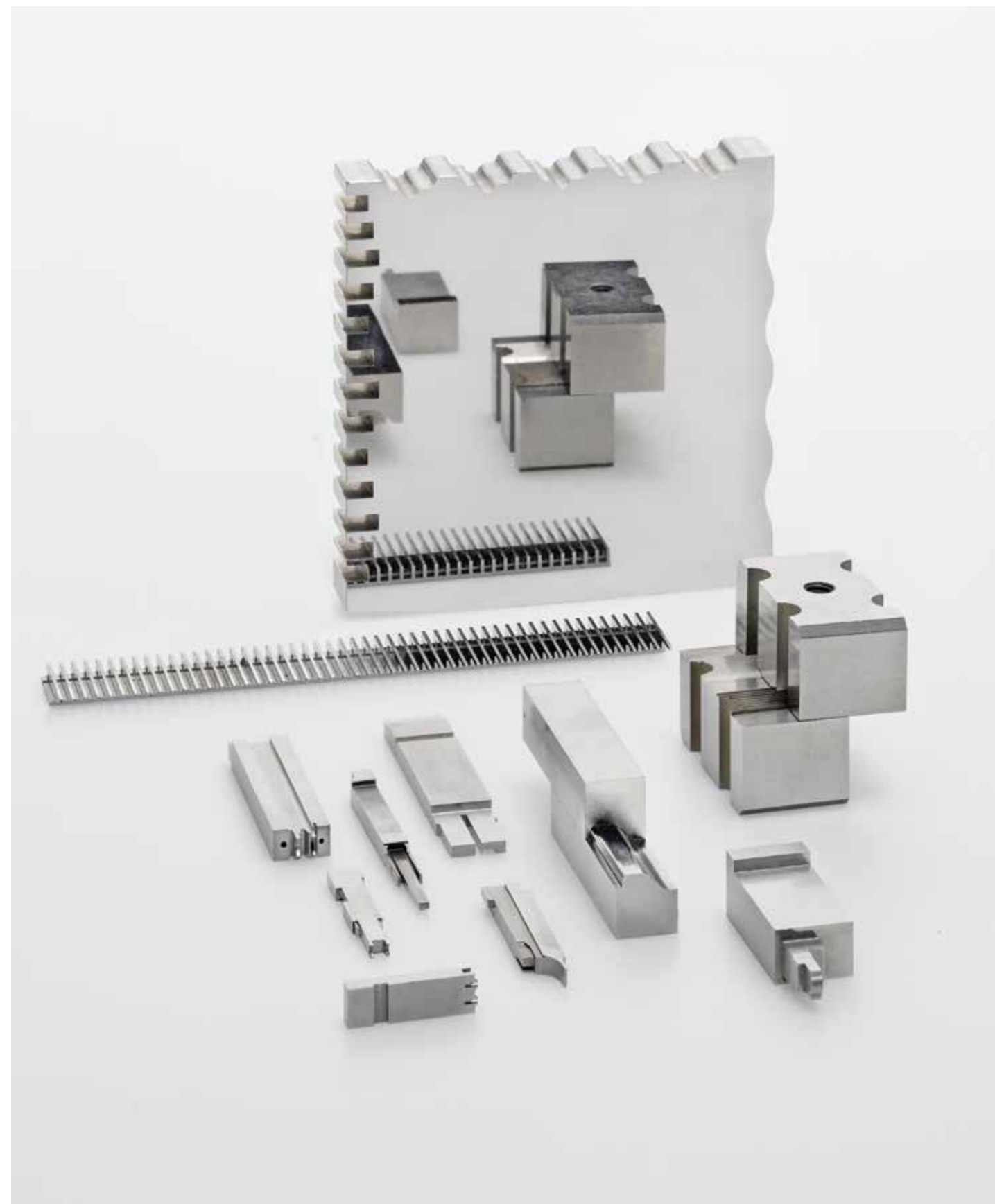


**Table mounted dresser PA-TLR28** for two universal diamond dressing disks for contour dressing.



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

## JE600 / JE800 Applications



Customer Care

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.
- We will provide a professional solution to your problems.



**Start up**  
Commissioning  
Warranty extension



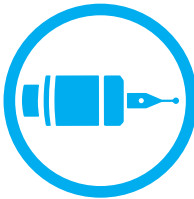
**Qualification**  
Commissioning  
Warranty extension



**Prevention**  
Maintenance  
Inspection



**Service**  
Customer service  
Customer consultation  
HelpLine  
Remote service



**Material**  
Spare parts  
Replacement parts  
Accessories

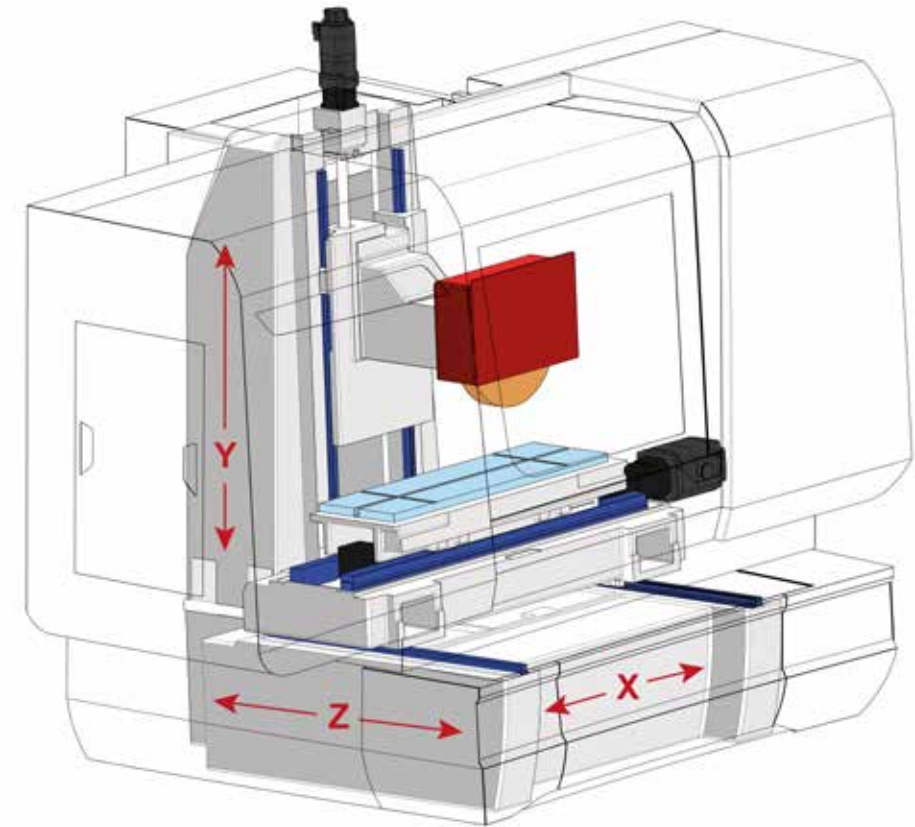


**Rebuilt**  
Machine overhaul  
Assembly overhaul



**Retrofit**  
Modifications  
Retrofits  
Machine trade-in

Technical data



		JE600	JE800
Grinding range	mm	300 x 600	400 x 800
Magnetic chuck	mm	300 x 600	400 x 800
Table clamping area with auxiliary surface	mm	300 x 1,000	400 x 1,200
Distance table to spindle center	mm	150...600	175...625
Table load with magnetic chuck, max.	kg	400	750
Table height above floor	mm	925	925
X-axis, longitudinal travel, max.	mm	700	900
Feed rate	mm/min	30...40,000	30...40,000
Y-axis, wheel head vertical travel, max.	mm	450	450
Feed rate	mm/min	4...3,750	4...3,750
Z-axis, saddle cross travel, max.	mm	345	465
Feed rate	mm/min	4...4,000	4...4,000
Grinding spindle drive, variable speed, AC-motor	kW/min <sup>-1</sup>	8.5/1,500	8.5/1,500
Speed, max.	1/min	5,000	5,000
Grinding wheel (d x w x bore)	mm	180...400 x 22...60 x 127	180...400 x 22...60 x 127
Dimensions width	mm	3,300	3,600
depth	mm	2,300	2,600
Weight, incl. electrical cabinet	kg	4,500	5,500

We reserve the right to make technical changes





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BLUECOMPETENCE

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