PLANOMAT XT

Flexible advanced technology for your production



Key Data

The PLANOMAT XT – high-quality technology for profile grinding.

- Five machine sizes (408/412/608/612/620)
- Grinding spindle drive up to 24,5 kW
- Optionally with linear direct drive



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

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 produc-

tests through training and maintenance contracts to retrofits, we offer our customers prompt and

tion 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.

PLANOMAT XT

Higher axis speeds, higher accelerations and increased system rigidity — the combination of these improved influencing factors consistently leads to an increase in productivity while at the same time improving workpiece quality. These characteristics distinguish the PLANOMAT XT as a universal, robust and powerful surface and profile grinding machine, which consistently builds on the experience and quality of the very successful PLANOMAT HP.

Characteristics

Dimensions

- 5 machine sizes with the following grinding ranges:
 - 400×800 mm
 - 400×1,200 mm
 - 600×800 mm
 - 600×1,200 mm
 - 600×2,000 mm

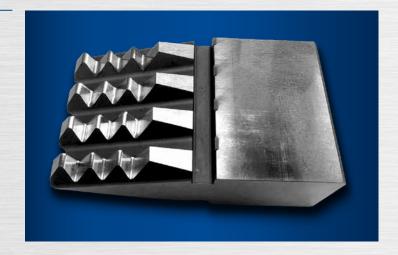
Hardware

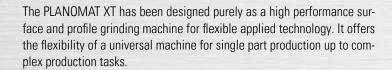
- Modular system
- High quality components comprising spheroidal graphite iron
- Thermal and vibration engineering characteristics optimized via finite element analysis
- Precison linear guideways
- High quality, recirculating ballscrews



Software

- Siemens 840D solution line with safety functions
- Optimal operator guidance
- Programming with menu-guided grinding and dressing cycles





Grinding spindle drives up to 24.5 kW guarantee outstanding performance using conventional as well as all CBN grinding methods.

A large spectrum of standard accessories and special part clamping and part handling systems offer a quick and economic adaptation to customer specific production requirements at high quality.



Control system and software

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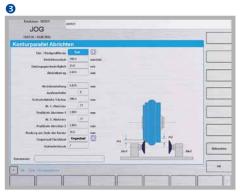


The best machines in a performance class offer more than just technically advanced components. Their high capabilities are made possible by the use of perfectly matched software and technology.

The CNC control Siemens Sinumerik 840D solution line with graphical operator guidance especially developed for grinding applications guarantees an optimal process. The simple programming is supported by menu guided grinding and dressing cycles.

The software option GripsProfile is a comfortable tool, especially for the single piece and batch production, for the automatic generation of grinding and dressing programs.









- Control panel
- 2 Thread rolling die grinding
- 3 Contour parallel dressing
- Basic data grinding wheel data
- 5 Taper grinding geometry data

UNITED GRINDING Digital Solutions™



No unscheduled machine downtime and optimally used resources thanks to Digital Solutions: The package offers monitoring of machine parameters and processes and provides instant connectivity and communication.

Production Monitor

Keep the overview: for example, running times and non-productive times, quantities or malfunction times are displayed in real time.

Remote Service

Always there for you, anytime and anywhere: Remote Service ensures fast, system-specific support from specialists.

Service Monitor

Everything in view – at the right time: Service Monitor shows which maintenance activities have to be carried out and when.

Optimum dressing

The table-mounted dressing device PA-TL 200S is suitable for diamond profile rolls up to 200 mm width or with universal diamond forming rolls and pre-profiling tool for contour dressing with quick change device for the roll pin.

The articulating dressing attachment PA-T130 enables continuous path controlled dressing by means of using the machine axes and the CNC controlled articulating axis of the dresser. The equipment includes an electronic measuring device with stand, probe and calibration ball.

 By using process-optimised dressing methods, workpieces can be manufactured with high precision at short cycle times and with minimum grinding wheel wear.





- Dressing device PA-T130
- Dressing device PA-TL 200S

Application examples

Automotive industry and suppliers









Turbine industry

4







Machine building

7







- Piston rack nut
- Sector shaft
- Rocker arms

- Blade
- Vane
- Shroud

- Hirth coupling
- 8 Chuck jaw
- Pump rotor

Tool and die industry

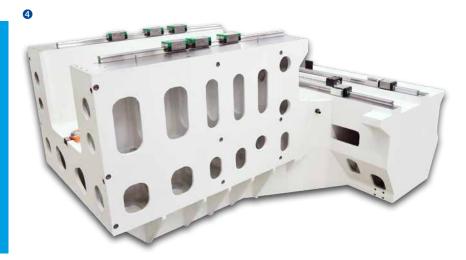




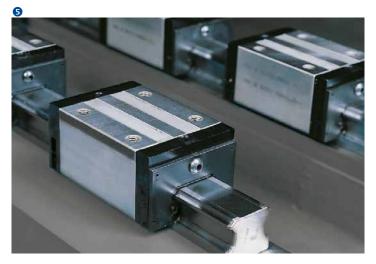


Well-proven construction principle

- The modular system of the PLANOMAT XT with high-quality components made of spheroidal graphite iron has been optimised thermally and vibration-wise via finite element analysis.
- The use of machine components specifically designed on the modular system ensures high precision and a long machine life.



₿





- Fin disc
- Powder metal punch
- Wood chipper blade

- 4 Machine bed
- Precision linear guideways
- **6** Re-circulating ballscrew

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.



Service
Customer service
Customer consultation
HelpLine
Remote service

- 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.



Digital Solutions™ Remote Service Service Monitor Production Monitor



Start upCommissioning
Warranty extension



Material Spare parts Replacement parts Accessories



QualificationTraining
Production support



RebuildMachine overhaul
Assembly overhaul

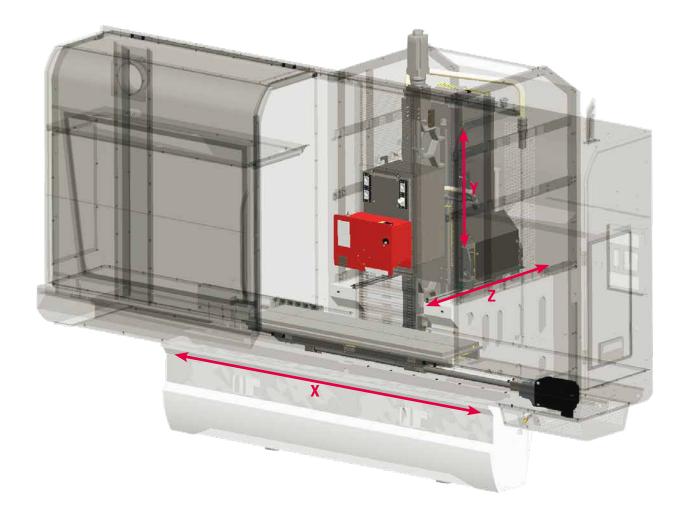


PreventionMaintenance
Inspection



Retrofit Modifications Retrofits Machine trade-in

Technical data



PLANOMAT XT		408	412	608	612	620		
Grinding Range	mm	400 × 800	400 × 1,200	600 × 800	600 × 1,200	600 × 2,000		
Table clamping area with auxiliary surface	mm	$400 \times 1,300$	$400 \times 1,700$	600 × 1,300	$600 \times 1,700$	$600 \times 2,500$		
Distance table to spindle center	mm	950						
X-axis, machine table longitudinal travel, max.	mm	1,100	1,500	1,100	1,500	2,300		
Feed rate	mm/min	30 40,000						
Y-axis, wheel head vertical travel	mm	800						
Feed rate	mm/min	4 10,000						
Z-axis, column cross travel	mm	360	360	560	560	560		
Feed rate	mm/min	4 16,000						
Grinding spindle drive, variable speed, AC motor	kW/rpm	15/6,000 (Option 24,5/6,000)						
Grinding wheel size (d x w x bore)	mm	400 × 100 × 127						
Dimensions Width	mm	4,000	4,800	4,000	4,800	6,400		
Depth, incl. electr. cabinet and panel	mm	3,230	3,230	3,430	3,430	3,430		
Height	mm	2,970	2,970	2,970	2,970	2,970		
Machine weight, incl. electrical cabinets	kg	7,300	7,600	8,500	8,900	10,800		

We reserve the right to make technical changes





Blohm Jung GmbH

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Location Göppingen

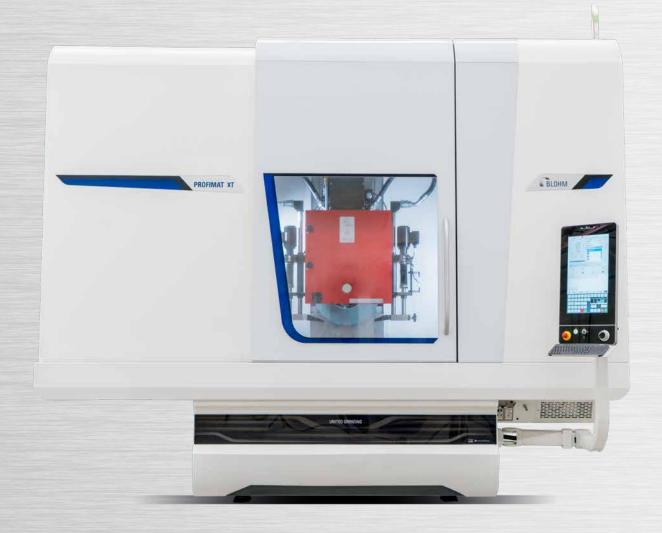
Jahnstraße 80-82 D-73037 Göppingen Phone +49 7161 612 0 Fax +49 7161 612 170 sales-gp@blohmjung.com

www.blohmjung.com



PROFIMAT XT

The new benchmark for productivity and precision



Key data

The PROFIMAT XT - high-quality grinding technology for profile grinding.

- Five machine sizes (408/412/608/612/620)
- Grinding spindle drive up to 62 kW
- Four integrated technologies



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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

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Characteristics

Dimensions

- 5 machine sizes with the following grinding ranges:
 - 400×800 mm
 - 400×1,200 mm
 - 600×800 mm
 - 600×1,200 mm
 - 600×2,000 mm

Hardware

- Modular system
- High quality components comprising spheroidal graphite iron
- Thermal and vibration engineering characteristics optimized via finite element analysis
- Precison linear guideways
- High quality, recirculating ballscrews



Software

- Siemens 840D solution line with safety functions
- Optimal operator guidance
- Programming with menu-guided grinding and dressing cycles

The PROFIMAT XT has been designed purely as a high performance profile grinding machine for flexible applied technology. The PROFIMAT XT is the right choice for applications where the production process requires high metal removal rates.

Grinding spindle drives up to 62 kW guarantee outstanding performance using conventional, CD or IPD as well as all 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 large spectrum of standard accessories and special part clamping and part handling systems offer a quick and economic adaptation to customer specific production requirements at high quality.



CNC Control

The comfortable solution for profile grinding applications



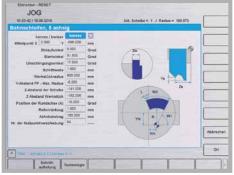
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The CNC control Siemens Sinumerik 840D solution line with graphical operator guidance especially developed for grinding applications guarantees an optimal process. The simple programming is supported by menu guided grinding and dressing cycles.

The software option GripsProfile is a comfortable tool, especially for the single piece and batch production, for the automatic generation of grinding and dressing programs.



Thread rolling die



5-axes continuous path controlles grinding



Contour parallel dressing



CD-grinding



Configurable HMI

Digital Solutions™



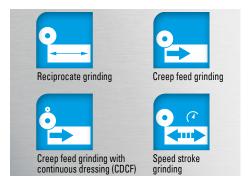
Digital SolutionsTM makes sure you have everything under control – at all times. The package offers monitoring of machine parameters and processes and provides instant connectivity and communication.

Optimum dressing



Table mounted dresser type PA-TL 200S for diamond rolls up to a width of 200 mm or for contour dressing with universal diamond dressing disks and a rough dressing disk.





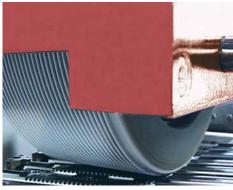
FIT – Four Integrated Technologies: The BLOHM PROFIMAT XT combines four technologies in one machine.

BLOHM Solutions

Automotive industry and suppliers



Connecting rod and cap

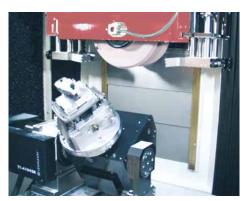


Steering racks

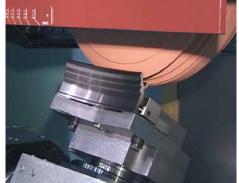




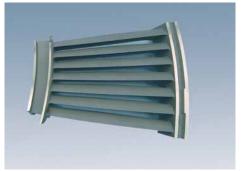
Turbine industry

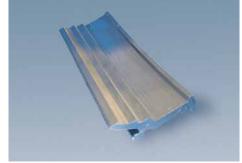


Turbine vane -5 axes cont. path controlled grinding



Shroud segment – multiple operations in 1 set-up



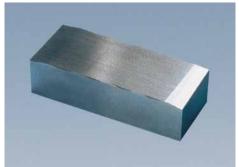


Tool and die industry





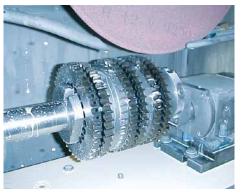
Thread rolling die

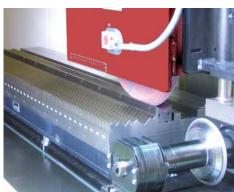




Machine building







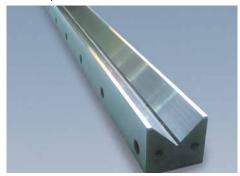
Tooth rack







Guideway



Customer Care





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Service
Customer service
Customer consultation
HelpLine
Remote service

- 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.



Digital Solutions™ Remote Service Service Monitor Production Monitor



Start upCommissioning
Warranty extension



Material
Spare parts
Replacement parts
Accessories



QualificationTraining
Production support



RebuildMachine overhaul
Assembly overhaul

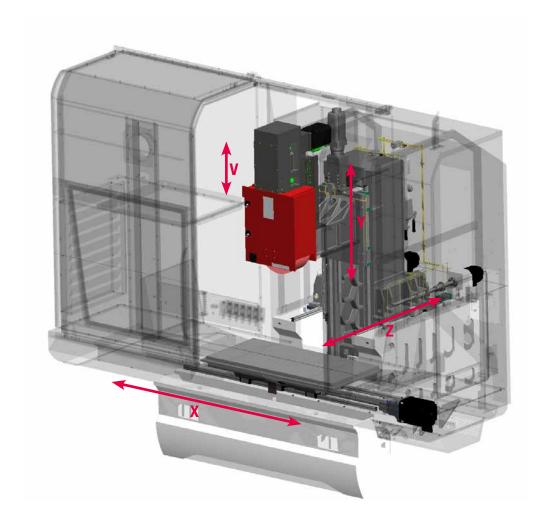


PreventionMaintenance
Inspection



Retrofit Modifications Retrofits Machine trade-in

Technical data



PROFIMAT XT		408	412	608	612	620			
Grinding Range	mm	400 × 800	400 × 1,200	600 × 800	600 × 1,200	600 × 2,000			
Table clamping area with auxiliary surface	mm	$400 \times 1,300$	400 × 1,700	600 × 1,300	$600 \times 1,700$	$600 \times 2,500$			
Distance table to spindle center	mm	970							
X-axis, machine table longitudinal travel, max,	mm	1,100	1,500	1,100	1,500	2,300			
Feed rate	mm/min	30 40,000							
Y-axis, wheel head vertical travel	mm	800							
Feed rate	mm/min	4 10,000							
Z-axis, column cross travel	mm	360	360	560	560	560			
Feed rate	mm/min	4 10,000							
V-axis, stroke of overhead dresser (opt,)	mm	160							
Grinding spindle drive, variable speed, AC motor	kW/rpm	44/8,000 (Option 62/8,000)							
Grinding wheel size (d x w x bore)	mm	400 × 160 × 127 (Option 500 × 200 × 203.2)							
Dimensions Width	mm	4,000	4,800	4,000	4,800	6,400			
Depth, incl. electr. cabinet and panel	mm	3,615	3,615	4,450	4,450	4,450			
Height	mm	3,445	3,445	3,445	3,445	3,445			
Machine weight, without electrical cabinets	kg	7,200	7,800	8,000	8,700	10,000			

We reserve the right to make technical changes





Blohm Jung GmbH

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PROFIMAT MT

Profile grinding with increased profitability



Key data

The PROFIMAT MT – first-class grinding technology for profile grinding.

- 6 machine sizes
- Grinding spindle drive up to 60 kW
- Max. wheel speed of 170 m/s



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PROFIMAT MT

The PROFIMAT MT is a robust, high-performance production grinding machine. High speeds and varied applications characterize the PROFIMAT MT. With an extensive range of accessories, the PROFIMAT MT can be optimally adapted to all customer requirements. CD, IPD and all CBN grinding processes are possible on the PROFIMAT MT.

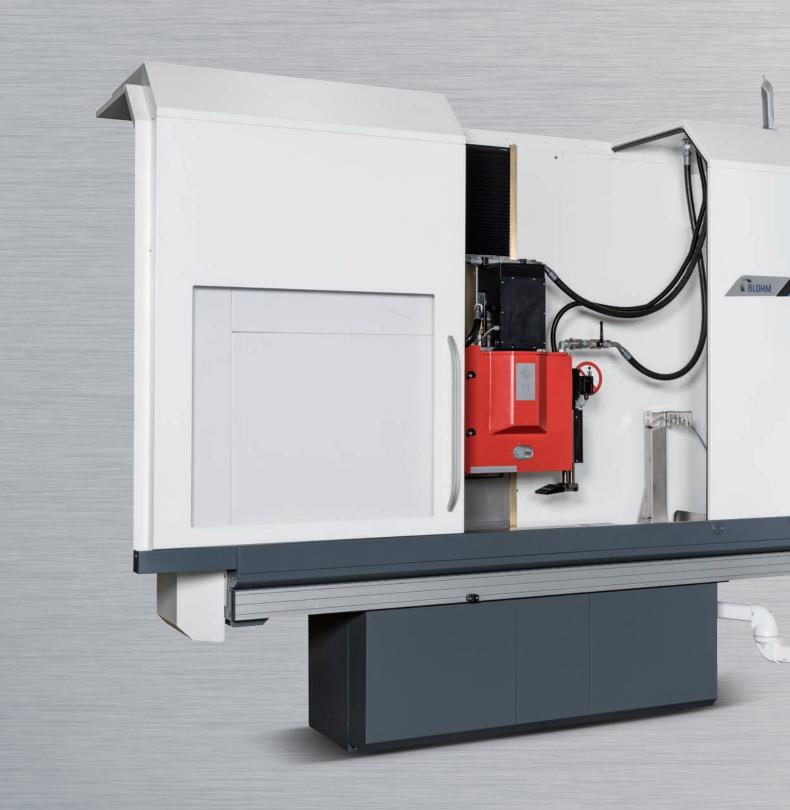
Characteristics

Dimensions

• 6 machine sizes with grinding ranges from 400 x 800 mm to 600 x 2,000 mm

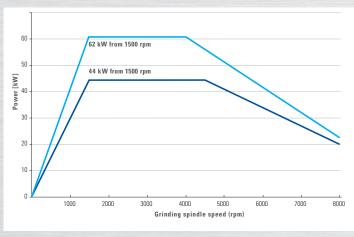
Hardware

- Modular system
- High quality components comprising gray cast iron
- Thermal and vibration engineering characteristics optimized via finite element analysis
- Precison linear guideways
- High quality, recirculating ballscrews



Software

- Siemens 840D solution line with safety functions
- Optimal operator guidance
- Programming with menu-guided grinding and dressing cycles



Grinding spindle drive power curves

The BLOHM PROFIMAT MT line has been designed purely as a high performance production grinding machine for flexible applied technology. The PROFIMAT MT is the right choice for applications where the production process requires high metal removal rates.

Grinding spindle drives with a power of up to 60 kW and a max. cutting speed of 170 m/s guarantee outstanding performance using conventional, CD or IPD as well as all 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 large spectrum of standard accessories and special part clamping and part handling systems offer a quick and economic adaptation to customer specific production requirements at high quality.



Well-proven – the design principle

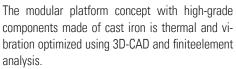




Z-axis, with linear glass scale



Precision guideways for stick-slip free motion



Selected components guarantee high precision and long life.



Cartridge type spindle with short taper for repeatable grinding wheel positioning



High-grade, ground re-circulating **ballscrews** in all axes for silent operation

Process optimized accessories



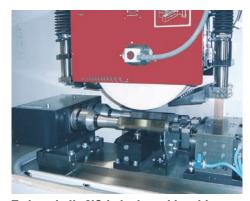
Vertical auxiliary grinding spindle for universal use in the mould and die industry with a power of up to 6 kW and up to 90,000 rpm



Horizontal auxiliary grinding spindle, automatically positioned in the working area, for the back-off grinding on broach tools using a min. wheel diameter of 30 mm



Measuring probe, pneumatically retracting from measuring position, up to 2 $\frac{1}{2}$ axes, measuring accuracy +/- 1 μ m



Twin-spindle NC-indexing table with tailstock, indexing accuracy +/- 3"



NC-tilting magnetic chuck, tilting range +/-30° indexing accuracy +/- 1"



NC-indexing table, 1 or 2 axes, indexing accuracy +/- 1"

Additional available accessories

- Automatic balancing systems
- Coolant filtration units
- Coolant mist exhaust units
- Accessory package for the use of pure grinding oil
- Acoustic sensors

$Razor Tec^{\tiny{\circledR}}$



New way of grinding wheel cleaning, with newly developed nozzle positioner, 30% less grinding wheel wear, 30-40 bar nozzle pressure

CNC Control

The comfortable solution for profile grinding applications



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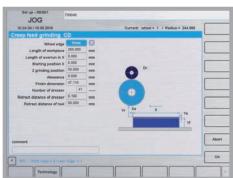
Thread rolling die



5-axes continuous path controlled grinding

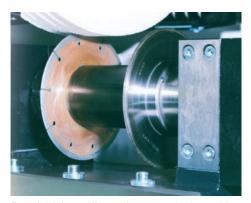


Contour parallel dressing

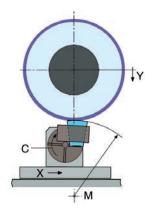


CD-grinding

Optimal dressing

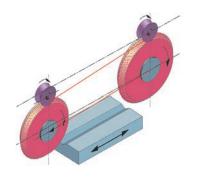


Fast initial profiling using a special roughing tool reduces the cost due to shorter cycles and less wear on precision tools.

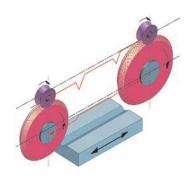


Continuous path controlled grinding, convex/concave, using interpolation of up to 5 axis permits grinding of large radii at utmost accuracy.

High precision parts are ground using an optimized dressing process offering shortest cycle times and minimal grinding wheel consumption.



CD-grinding, the grinding wheel is being continuously dressed.



IPD-grinding, the in process dressing whilst grinding saves time and the possible grinding length is extended by the optimized grinding wheel topography.

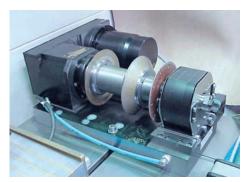


Table mounted dresser type PEA-TR200S for diamond rolls up to a width of 200 mm or for contour dressing with universal diamond dressing disks and a rough dressing disk.



Overhead dressing system PEA-K for IPD and CD grinding methods designed for a grinding wheel width of up to 200 mm.

BLOHM Solutions

Automotive industry and suppliers



Roller for diesel injection pump



Housing for diesel injection pumps







Connecting rod and cap

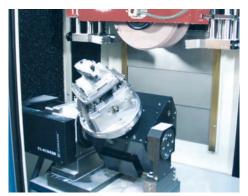


Steering racks





Turbine industry



 $\label{thm:controlled} \text{Turbine vane} - 5 \text{ axes continuous path controlled} \quad \text{Turbine blade}$ grinding







Root profile



Root and shroud profile

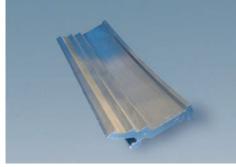


 ${\tt Compressor\,blade-multiple\,operations\,in\,one\,set-up}$



Shroud segment — multiple operations in 1 set-up

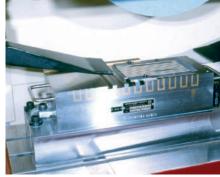




BLOHM Solutions

Tool and die industry

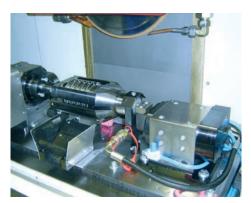




Thread rolling die









Die

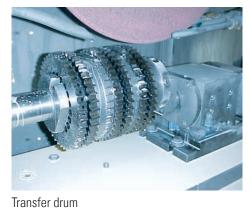




Machine building



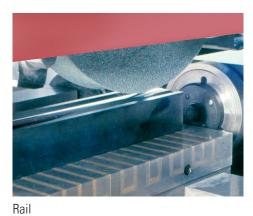






















Customer Care

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 upCommissioning
Warranty extension



QualificationTraining
Production support



PreventionMaintenance
Inspection



ServiceCustomer service
Customer consultation
HelpLine
Remote service



Material Spare parts Replacement parts Accessories

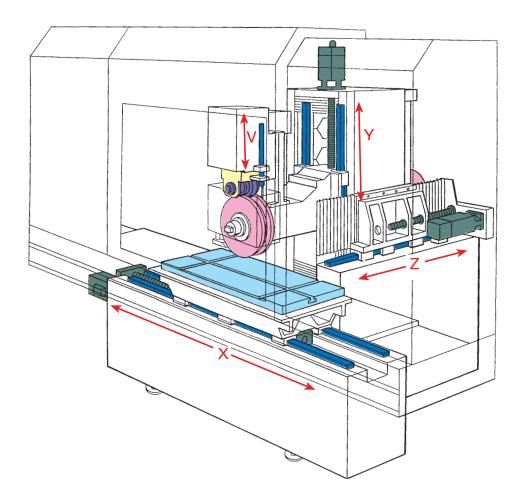


RebuiltMachine overhaul
Assembly overhaul



RetrofitModifications
Retrofits
Machine trade-in

Technical data



PROFIMAT MT		408	412	608	612	616	620
Grinding Range	mm	400 x 800	400 x 1,200	600 x 800	600 x 1,200	600 x 1,600	600 x 2,000
Table clamping area with auxiliary surface	mm	400 x 1,200	400 x 1,600	600 x 1,200	600 x 1,600	600 x 2,000	600 x 2,400
Distance table to spindle center	mm	150 700 (optional 950)					
X-axis, machine table longitudinal travel, max.	mm	900	1,300	900	1,300	1,700	2,100
Feed rate	mm/min	15 25,000					
Y-axis, wheel head vertical travel	mm	550 (optional 800)					
Feed rate	mm/min	4 3,750					
Z-axis, column cross travel	mm	320	320	520	520	520	520
Feed rate	mm/min			4 4,	000		
V-axis, stroke of overhead dresser (opt.)	mm	130					
Grinding spindle drive, variable speed, AC motor	kW/rpm	up to 60/8,000					
Grinding wheel size (d x w x bore)	mm	up to 500 x 200 x 127 (203.2)					
Dimensions Width	mm	3,500	4,500	3,500	4,500	5,600	5,900
Depth ¹⁾	mm	4,500	4,500	4,700	4,600	4,600	4,700
Height	mm	2,700 ²⁾	$2,700^{2)}$	2,700 ²⁾	2,700 ²⁾	2,700 ²⁾	2,700 ²⁾
Machine weight, without electrical cabinets	kg	6,500	6,700	7,500	8,000	8,000	8,000

¹⁾ incl. electrical cabinets and operator panel

We reserve the right to make technical changes

²⁾ 3,400 with enrised column





Blohm Jung GmbH

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PROFIMAT MC/RT

The compact production machine



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.



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.

PROFIMAT MINISTRATE OF THE PROFIT OF THE PRO

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
- PROFIMATMCwithverticalspindle:Rotarytablediameterupto
 1,200 mm
- PROFIMAT RT with rotary indexing table diameter 1,000 mm

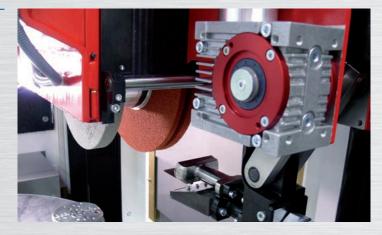
Hardware

- 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



RazorTec®, newwayofgrinding wheel cleaning, with newly developed nozzlepositioner, 30% less grinding wheel wear, 30-40 barnozzle pressure

Extremely c ompact 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.

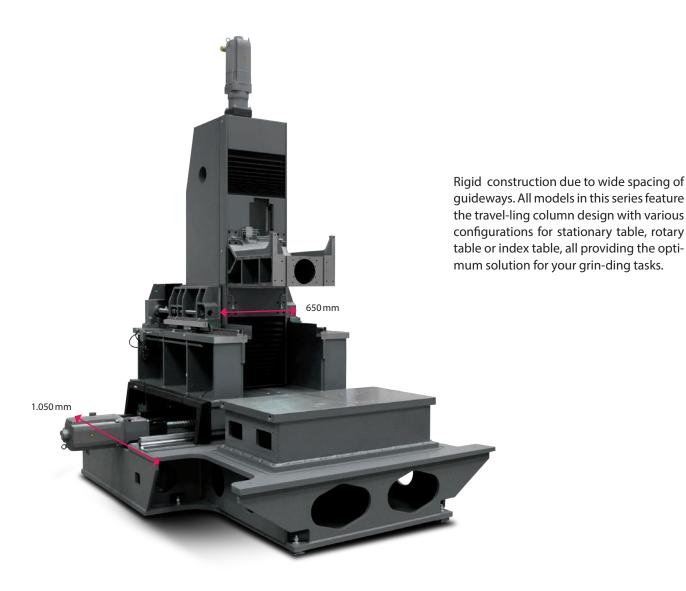
Grinding spindle drives with a power of up to 60 kW and a max. cutting speed of 1 70 m/s guarantee outstanding performance using conventional, CD- or IPD as well as any CBN grinding methods.

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.

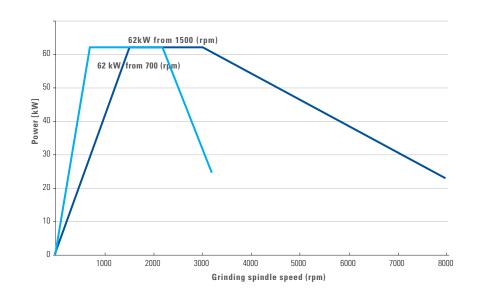
A broad range of standard accessories and special workpiece clamping and handling systems enable quick adaptation to customized production tasks with high cost efficiency and quality.



High flexibility with a modular system



Grinding spindle drive power curves



Established construction principle



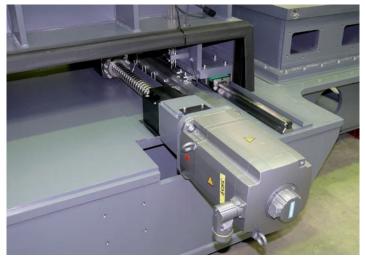
Z-axis with linear guideways, ground re-circulating ballscrews and linear glass measuring system



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

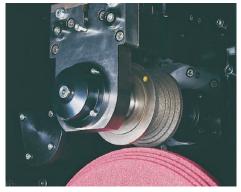


Cartridge type spindle with short taper for repeatable grinding wheel positioning

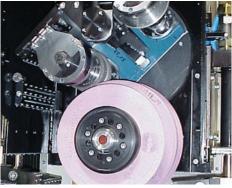


X-axis with linear guideways, ground re-circulating ballscrews

Process optimized accessories



SinglespindleCD-dressingsystemmounted on wheel hand (V-axis)



DoublespindleCD-dressingsystemmounted on wheel head (E-axis)



Double CNC indexing table for 5-axis continuous path controlled profile grinding

Accessories like

- Single or double CNC indexing tables
- Integrated automatic gauging systems
- Dressingsystemsmountedonthemachine table and/or grinding wheel head offer a wide variety of customer specific solutions.

Tool changing system



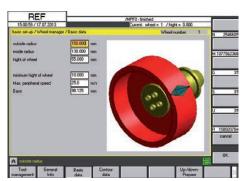
Tool changing systems with up to 24 tools 12 x D=300 or 8 x D=400

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.

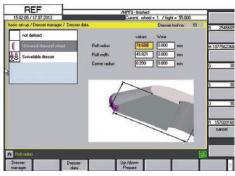
CNC Control

The convenient solution for profile grinding applications

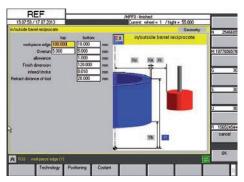




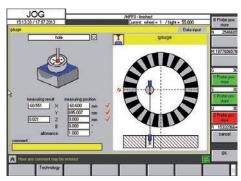
Input screen for a cup wheel



Input screen for a dresser



Parameterinputscreenfortheexternal cylindrical grinding cycle



Parameter input screen for the hole measuring cycle



Versions

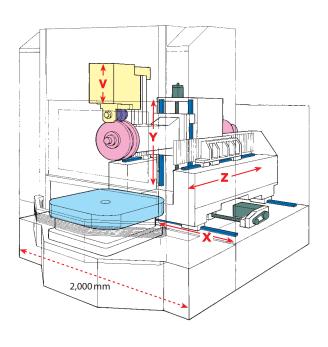
PROFIMAT MC 607 with tool changing system



PROFIMAT RT1000

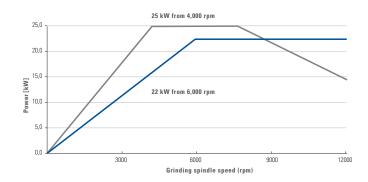
The PROFIMAT RT features an indexing table and reduces non-productive times due to loading/unloading while grinding.





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.

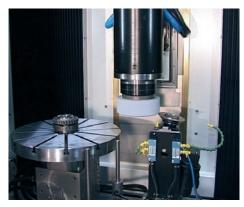




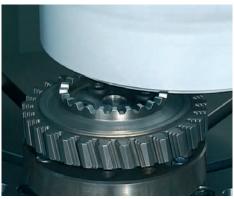
PROFIMAT MC 610VS with CNC controlled tilting grinding spindle



 $\label{lem:profile} PROFIMATMC610VS\,with\,vertical\,grinding\\ spindle$



CNC dressing with rotary diamond disk



Curvic coupling face gear



CNC dressing with single point diamond

BLOHM solutions

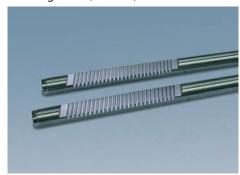
Automotive industry and suppliers



Steering racks (MC 607)

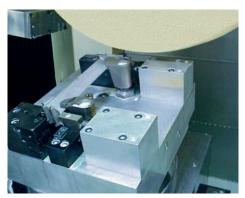


Piston rack nut (RT1000)





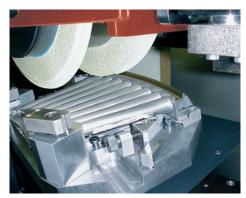
Turbine industry



Turbine blade (MC 607)



 $Stationary gas turbine blade 800 mm (MC 607 \ VG) \\$

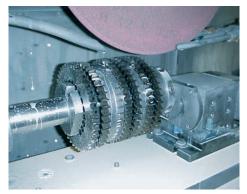


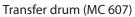


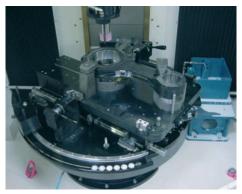




Machine building







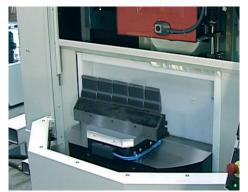
Connecting rod for marine diesel engine (MC 610VS)







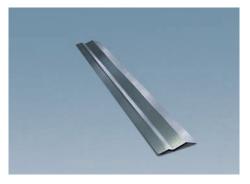
Knife (RT1000)



Press break tool (RT1000)



Press break tool (MC 607)





Customer Care

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- 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

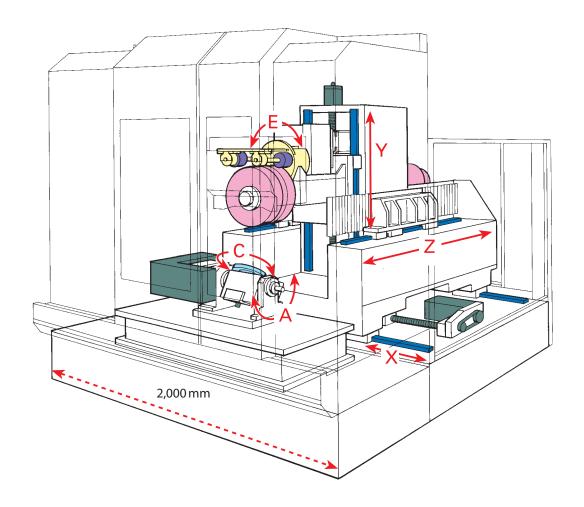


Rebuilt Machine overhaul Assembly overhaul



Retrofit Modifications Retrofits Machine trade-in

Technical data



PROFIMAT		MC 607	MC 610	MC 610 VS	RT 1000			
Grinding range	mm	600×700	600 x 1,000	600 x 1,000	_			
Indexing table, diameter	mm	_	_	6001,200	1,000			
X-axis, column longitudinal travel	mm	700	1,000	1,000	1,000			
Y-axis, wheel head vertical travel	mm	650	550 ²⁾	800	550			
Z-axis, column cross travel	mm	520	520	320	520			
A-axis, indexer range (optional)	deg	+ 105 / -90						
C-axis, indexer, range (optional)	deg		360					
E-axis, stroke of head mounted dresser (opt.)	mm	_	_	_	_			
V-axis, stroke of head mounted dresser (opt.)	mm	130	130	_	130			
Grindingspindledrivepower,revolution I	kW/rpm		bis 60/8	3,000				
Grinding wheel (d x w x bore), max.	mm	500x200x127	500 x 200 x 127	500 x 100 x 127	500 x 200 x 127			
Dimensions width	mm	2,400	2,380	2,380	2,380			
depth	mm	4,200	4,100	4,400	4,100			
height	mm	3,200	3,000	3,500	2,900			
Weight(machinewithoutelectr.cabinet)	kg	8,500	7,500	9,000	7,000			

¹⁾Option 1,200 mm ²⁾Option 800 mm

We reserve the right to make technical changes



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PLANOMAT HP

Cutting edge technology for surface and profile grinding



Key data

The PLANOMAT HP combines the know-how and tradition of more than 1,000 delivered machines. Its range of application extends from customized production solutions to universal grinding machines for individual component and small batch production.

The PLANOMAT HP is available in 6 sizes: from 400 x 800 mm to 600 x 2,000 mm.



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.

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PLANOMAT HP

With over 1000 sold machines the PLANOMAT HP offers cutting edge technology for surface and profile grinding for more than 20 years · The many different potential applications guarantee maximum flexibility for your production · The constantly maintained precision over a long lifetime allows the production of high quality workpieces

PLANOMAT HP - reliable, versatile, unique

Charakteristics

Dimensions

6 machine sizes with grinding ranges of 400 x 800 mm, 400 x 1,200 mm, 600 x 800 mm, 600 x 1,200 mm, 600 x 1,600 mm and 600 x 2,000 mm

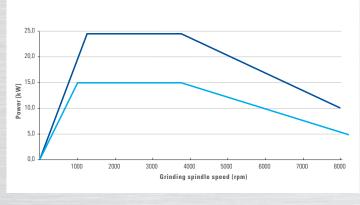
Hardware

- Modular system
- High quality components comprising gray cast iron
- Thermal and vibration engineering characteristics optimized via finite element analysis



Software

- BLOHM EasyProfile control system
- Operation with high level of programming convenience
- Siemens 840D solution line with safety functions
- Programming with menu-guided grinding and dressing cycles
- Tailormade CNC control unit for tool and die making



The grinding spindle drive has a capacity of 15 kW. A 24.5 kW drive is optionally available.

The PLANOMAT HP excels due to high feed and acceleration rates using high precision re-circulating ball screws and digital servo drives. Almost maintenance free linear guideways, linear glass measuring scales for Y- and Z-axis as well as powerful grinding spindle drives of 15 kW (opt. 24.5 kW) complete the future orientated concept.

Machine bed, column, table and wheel head of the PLANOMAT HP machines are made of cast iron. This provides high rigidity and dampening. Thanks to 3D-CAD and finite element analysis, we have further optimized the rigidity and weight of the machines. This design guarantees high precision and long life time.

The PLANOMAT HP series is available with the new EasyProfile control or with the CNC control Siemens 840D solution line.

Plug and play: a 3-point location (PLANOMAT HP 408 - 612) and the integrated electrical cabinet make it possible. Special foundations and electrical installations between machine and cabinet are not required.

For every need: whether as customer specific production solution or as a universal machine for single part and small batch production, the PLANOMAT HP offers both in 6 sizes.



Well-proven – the design principle



Z-axis, direct drive with linear glass scale



High-class, ground re-circulating ballscrews in all axes for silent operation



Precision guideways for stick-slip free motion



Cartridge type spindle with short taper for repeatable grinding wheel positioning

Dressing attachments



Tilting dressing attachment for circumferential, face and profile dressing. The attachment is pneumatically actuated and is tilting down to avoid collision with the grinding wheel and wheel guard during the grinding cycle.



Table mounted dresser type PEA-TL200S for diamond rolls up to a width of 200 mm or for contour dressing with two universal diamond dressing disks and a rough dressing disk.

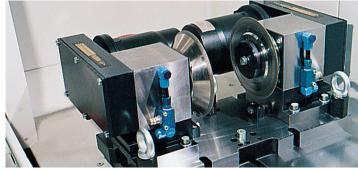
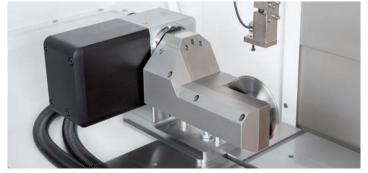


Table mounted dresser type PA-TLR40 for universal diamond dressing disks for contour dressing. The roll arbors can be tilted by 0.3 mm for calibrating of grinding wheels.

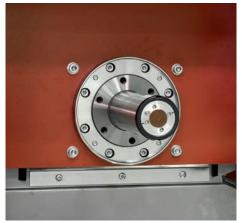


Articulating dressing attachment PA-T130 continuous path controlled dressing by means of using the machine axes and the CNC controlled articulating axis of the dresser. Electronic measuring device with stand, probe and calibration ball.

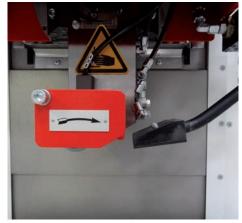
Accessories for the process optimized production



NC indexing table, 1 or 2 axis, indexing accuracies up to ±1"



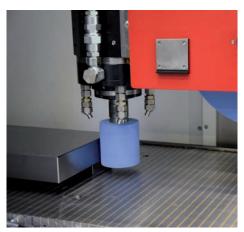
Automatic grinding wheel balancing, permanently mounted to the spindle



Horizontal grinding spindle arm for grinding wheel diameters of 50 ... 100 mm, up to 20,000 rpm



Measuring probe, pneumatically retracting from measuring position, measuring accuracy ±1 µm



Vertical grinding spindle, on sliding bracket, 5 kW, max. 30,000 rpm

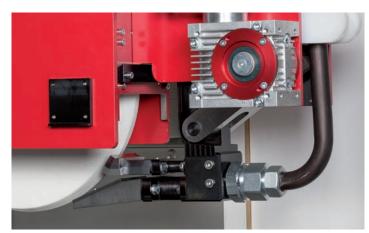


Additional horizontal grinding spindle, 18,000 rpm; 13 kW

Additional accessories:

- Electro-permanent magnetic chucks
- Automatic balancing systems
- Coolant filtration units
- Coolant mist exhaust units
- Accessory package for the use of pure grinding oil
- Acoustic sensors
- Special horizontal or vertical grinding spindles

RazorTec®



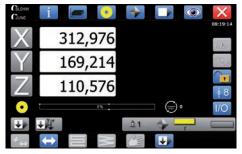
New way of grinding wheel cleaning, with newly developed nozzle positioner, 30% less grinding wheel wear, 30-40 bar nozzle pressure

Operation made easy – the BLOHM EasyProfile control



The BLOHM EasyProfile control revolutionized the operation. It 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.

You utilize the performance of our PLANOMAT HP machines optimally with the BLOHM Easy-Profile control and increase your productivity sustainable.



Standard screen



Simple definition of workpiece dimensions



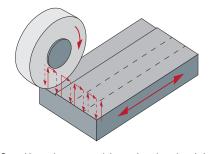
3 layer automatic grinding cycle: roughing, semi-finishing, finishing, spark-out with integrated dressing cycles. Only a few parameters are required to complete the cycle.

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 ECOroughing 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, BLOHM's new 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 productivity – with EasyProfile-upgrades

Software package 1 – Additional grinding cycles

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.

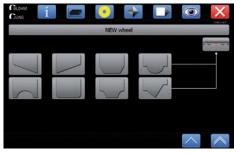
Grinding program for rotary table – surface grinding by means of oscillation of the Z-axis with positioned X-axis and automatic infeed in Y-direction.

Automatic gap control to reduce air-grinding time for work pieces 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

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.



Selection of wheel contour

Software package 3 – Face grinding and calibrating

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

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.

Software package 5 - External programming workstation

With the software package 5 we provide you with the hard- and software for an external programming workstation with interface to the machine. Thus you can generate any contour from GripsProfile without interruption of your production. This will increase your productivity and efficiency.

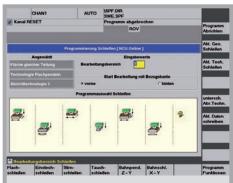
Key advantages

- 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

Tailor-made for tool and die making – the CNC control unit for individual parts and small batches



Standard screen



Preparation of grinding and dressing programs as well as file management



Management of up to 100 grinding wheels and 30 dressing tools

The PLANOMAT HP CNC machine control is a combination of the proven Siemens 840D solution line and program cycles especially developed for the tool and die industry by BLOHM. This combination makes the PLANOMAT HP 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:

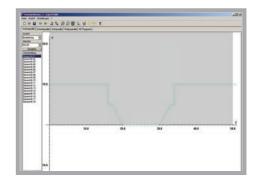
- 13 standard contours
- Import of dxf-files
- Contour program generation
- Simulation

Optional grinding cycles: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



We are looking forward to informing you about our productivity-enhancing software upgrades.

CNC control – comfortable solution for profile and contour grinding production applications



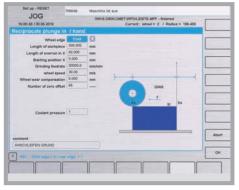




Program editor



Grinding wheel data



Workpiece parameter

Key advantages

- 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

BLOHM offers for the PLANOMAT HP a production version of the CNC control Siemens 840D solution line with PCU 50 which is especially adapted for the needs of profile and contour grinding applications in large batch and mass production. The BLOHM user interface with keyboard and graphical operator guidance simplifies the programming. A variety of parametric grinding and dressing cycles allow quick generation of the main programs. Individual cycles assist to create a very flexible,

sequential program structure and time-optimized program sequence. Using the optional software GripsProfile ensures that even complex grinding and dressing programs are created with ease. The functions for grinding wheel balancing and process monitoring through acoustic touch sensor are optionally available. The control system also manages the grinding wheels and dressers.

In addition the CNC control includes the integration of additional functions and peripheral devices such as:

- Frequency controlled coolant pumps and automatic coolant nozzles trace systems
- Automatic balancing system
- NC-indexing table
- Measuring probe
- Tool management
- Acoustic sensors

PLANOMAT HP productive manufacturing solutions

Machine building





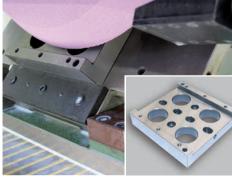
Hirth-coupling

Three jaw chuck

Tool and die industry







Broach tool

Press-break tool

Tool holder

Bearing industry

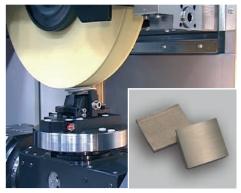


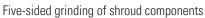


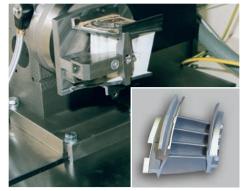


Grinding of anti-rotation slots

Turbine industry







Vane



Blade

Hydraulic industry



Inner-profile of hydraulic pump rotor



Outer-profile of hydraulic pump rotor



Slots of pump rotor

Automotive industry and suppliers



Fin disc for radiators



Steering rack piston nut



Roller for injection-pump

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



QualificationTraining
Production support



PreventionMaintenance
Inspection



ServiceCustomer service
Customer consultation
HelpLine
Remote service



Material Spare parts Replacement parts Accessories

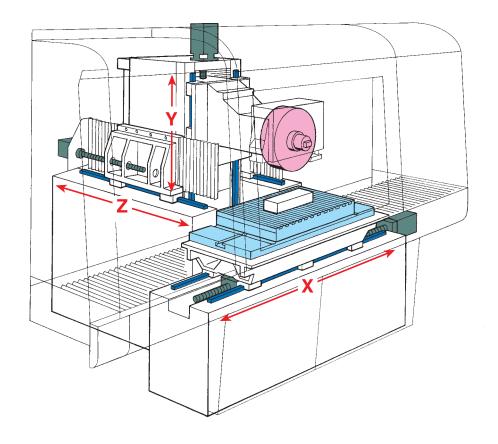


RebuiltMachine overhaul
Assembly overhaul



RetrofitModifications
Retrofits
Machine trade-in

Technical data



PLANOMAT HP		408	412	608	612	616	620
Grinding range	mm	400 x 800	400 x 1,200	600 x 800	600 x 1,200	600 x 1,600	600 x 2,000
Table clamping area with auxiliary surface	mm	400 x 1,200	400 x 1,600	600 x 1,200	600 x 1,600	600 x 2,000	600 x 2,400
Distance table to spindle center	mm	150 700 (optional 950)					
X-axis, longitudinal travel, max.	mm	900	1,300	900	1,300	1,700	2,100
Feed rate	mm/min				30 40,000		30 30,000
Y-axis, wheel head vertical travel, max.	mm			550 (optiona	l 800)		
Feed rate	mm/min			4 6,00	00		
Z-axis, column cross travel, max.	mm	360	360	560	560	560	560
Feed rate	mm/min			4 6,00	00		
Grinding spindle drive, variable speed,	kW/rpm	15/1,000 (optional 24.5/1,250)					
AC-motor							
Grinding wheel (d x w x bore).	mm			400 x 30 10	0 x 127		
Dimensions width	mm	3,740	4,740	3,740	4,740	5,450	5,450
depth*	mm	3,410	3,410	3,510	3,510	3,560	3,560
height	mm	2,800	2,800	2,800	2,800	2,800	2,900
Weight, incl. electrical cabinet	kg	5,500	6,600	7,500	8,000	min. 8,000	min. 8,000

^{*} incl. electrical cabinet and operator panel

We reserve the right to make technical changes





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