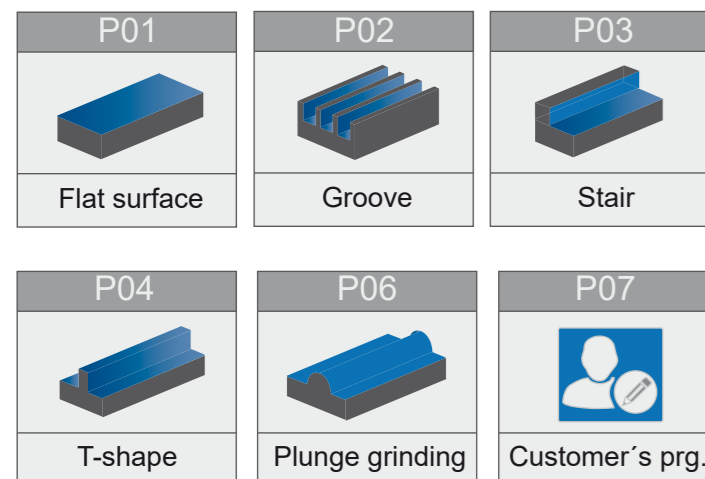


Control system

This 3rd generation of our own control system comes from the previous systems developed for the purpose of modernization of grinding machines for automatic production. X-Solution means a lot of new options, which is reflected in the standard equipment of whole system. It is based on a touch screen, intuitive interface and dialog type program making with sophisticated grinding cycles for different workpieces.



- + Intuitive and easy operation
- + Reduction of time delays
- + Faster program creation in few steps

- + Possibility to add a new customer's cycles
- + Reliable system with on-line diagnostic
- + Sophisticated system management



Standard function

- Dialog type program making
- 10" touch screen
- 2 base grinding cycles for surface
- 4 base cycles for grooves grinding
- 3 cycles for grinding of stairs type workpieces
- 3 grinding cycles for T - shapes
- Rough grinding
- Fine grinding
- Wheel spark-out
- Re-grinding function to final exactly dimension
- Cycles for grinding wheel dressing
- Automatic compensation after dressing
- Tabular visualization during grinding
- Displaying of speed, feed rate and cutting speed
- Tool table with a direct selection and edit
- 3 operating modes: Jog, Manual, Auto
- 2 parent modes: operation and adjustment
- Time and Date
- Alarms and user reports
- Technological information

Specification

BP-XXXXX - 2AX - cross and vertical axis driven by servomotor, longitudinal hydraulic
- 3AX - all 3 axe are driven by servomotor

Table type

Type	BP-2550	BP-3060	BP-4080
Max. cross x longitudinal travel	350 x 900 mm		
Spindle center height from table	600 mm		
Grinding surface of table	250 x 500 mm	300 x 600 mm	350 x 800 mm
Table speed in longitudinal axis	1-25 m/min		
Hydraulic motor (2AX only)	1.5 kW		
Working feed	1240 mm/min		
MPG step feed	0,001/0,005/0,01/0,05 mm		
Grinding wheel dimension	355 x 38 x 127 mm		
Grinding wheel cover dimension	450 x 155 mm		
Max. height from table top to bottom of standard wheel	422 mm		
Spindle motor	3.7 kW		
Spindle speed	Stepless speed change 2400 rpm		
Machine net weight	3000 kg		
Machine gross weight	3600 kg		

Column type

Type	BP - 50100	BP - 50120	BP - 50150	BP - 60120	BP - 60150	BP - 60220	BP - 60250
Max. cross x longitudinal travel	560 x 1150	560 x 1350	560 x 1650	660 x 1350	660 x 1650	660 x 2350	660 x 2650
Spindle center height from table	700 mm						
Grinding surface of table	500 x 1000	500 x 1200	500 x 1500	660 x 1200	600 x 1500	600 x 2200	600 x 2500
Table speed in longitudinal axis	1-25 m/min						
Hydraulic motor (2AX only)	1240 mm/min						
Working feed	0,001 mm						
MPG step feed	0,001/0,005/0,01/0,05 mm						
Grinding wheel dimension	(V.P x Š x I.P)- standard 355x50x127mm						
Grinding wheel cover dimension	Standard: 450 x 155 mm						
Max. height from table top to bottom of standard wheel	Stepless speed change 2400 rpm						
Spindle motor	7.5(11) kW						
Spindle speed	3.7 kW						
Machine net weight	5800 kg	6100 kg	7000 kg	6500 kg	7400 kg	8900 kg	12500 kg
Machine gross weight	6900 kg	7500 kg	8500 kg	7900 kg	9000 kg	12000 kg	15600 kg

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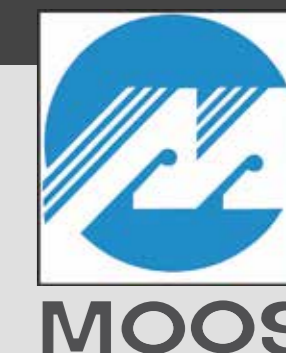
www.m-moos.cz

Surface Grinding Machines

for effective flat and shapes grinding



We follow a deep tradition of machinetool production



New grinding standard

Surface grinders series BP are based on many years of experience the company M-MOOS with the overhauling and modernization of grinding machines for automatic production. They are designed for efficient and precise grinding of flat and contoured surfaces. The overall machine concept follow the company philosophy: To provide modern grinding machines and technologies that will meet the requirements of industrial production in the 21st century.



Key features

- + Intuitive and simple operation
- + Solid cast-iron construction machines
- + Fast dialog type programming
- + V-V Guideways guarantee high precision
- + Sophisticated and easy cycles
- + Wide range of standard equipment
- + Re-grinding to precise dimensions
- + Comfortable operation and maintenance

Grinding machines using

The high level of automation and precision predetermines surface grinders M-MOOS to use in many fields of automotive, aerospace, for manufacturing tools and molds, and also in the global engineering industry. A wide variability allows to create customer-oriented programs and turn-key technology for each customer. This system doesn't require any basic programming knowledge or ISO code, even when the complex shapes are grinded



Time savings over conventional and NC grinding machines plane

Time saving while preparatory job
90%

Minimum vibration



The main feature are hand scraped V-V guideways in longitudinal and cross axis. This type of guideway perfectly absorbs vibrations and provides a high linear accuracy. Length of guideways surfaces are proportional to the length of travel worktable so there is no twisting or floating of workbench.

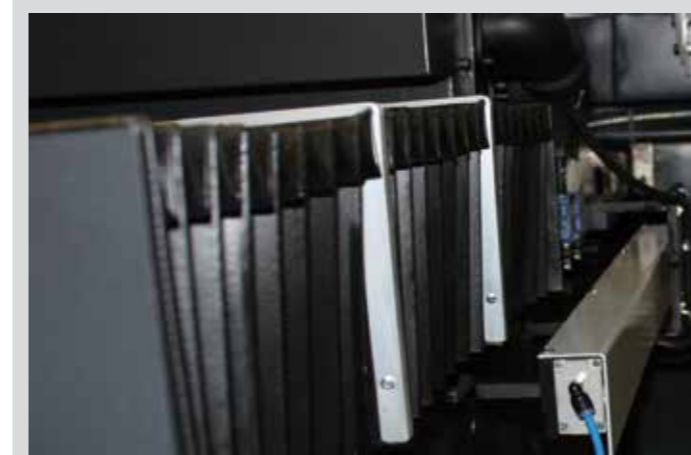
High precision spindle



Our tested guarantee of spindle run out is up to 0.0015 mm. The high precision preloaded roller thrust and radial bearings ensure minimum spindle runout. A special lubricant and extremely high-quality bearing seals provide a long-term durability.

Achieving work precision is 0.005 mm over the whole surface of the table

High accuracy

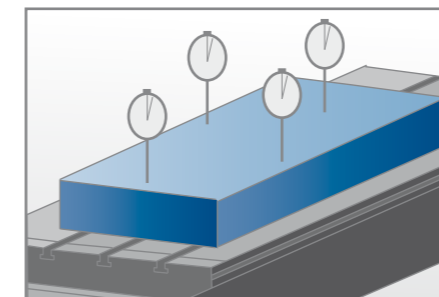


Cross and vertical axis is fitted by linear scales ESSA Prague with an accuracy of 0.001 mm, which ensures high positioning accuracy. Dust protection of scale is ensured by supply of compressed air directly into the scale. The air is perfectly filtered through HEIDENHAIN DA 400, which provides filtration of particles less than 0.01 micron.

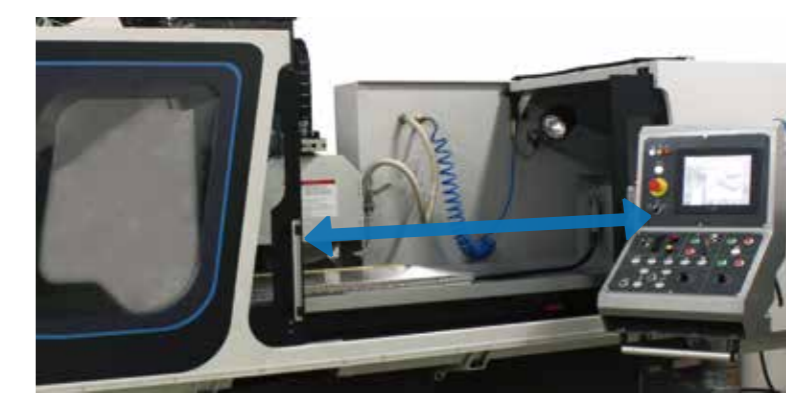
Ball screw with higher accuracy



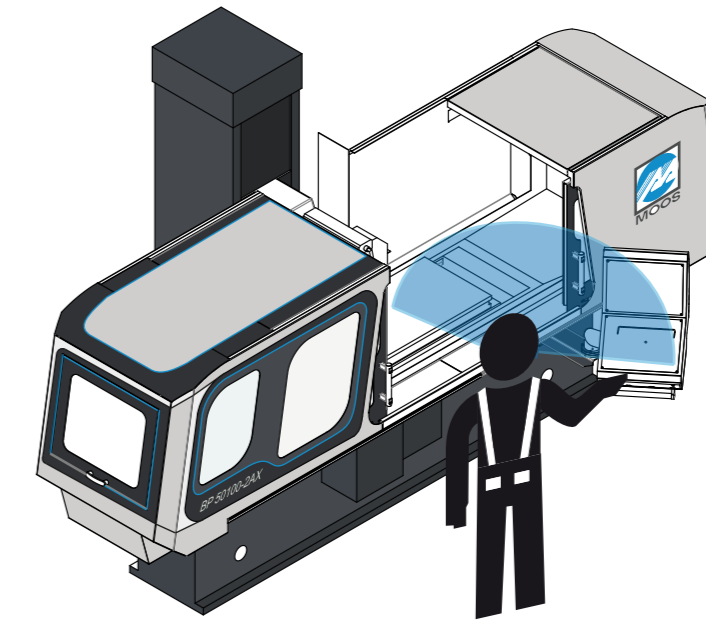
Standard machine version used servomotors for driven cross and vertical axis. The each axis is equipped with precision ball screws of Czech manufacturer KSK, which provide a long-term working accuracy.



User friendly working area



Comfortable operation



The whole concept of grinders is strictly focused on user's comfort. It means that all points include safety guards must be in accordance with comfortable operation. Therefore, after opening of front door, the sufficient space for workpiece handling, setting, measuring or maintenance operations, is available. The standard equipment included a coolant gun with additional removable brush to keep working area clean. Operation of coolant gun, workpiece coolant and rear flush is controlled from the operator panel through button and solenoid valve. 2 working lamps provide a perfect work illumination.

Rotary arm with 2 joints and a hinged panel about +/- 30° provides a variable adjustment according to the needs and physical condition of the operator. The short distance between front of sheet guard and table gives the operator a perfect overview about situation on display and in the working area simultaneously. All M-MOOS grinders used this type of panel. For a comfortable approach while adjusting operations the MPG EUCHNER is provided as a standard.



10" touch screen and ergonomically placement of control elements ensure Easy and Fast operation