



CNC INTERNAL GRINDING MACHINES

CNC内圆磨床





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## CNC 内圆磨床

AZ grinding machines range has been designed to fulfil the requirements of a wide range of applications: internal high precision grinding, external grinding, face and taper grinding of components like transmission shafts, gas turbine shafts, aerospace components, landing gear, etc.

AZ万能磨床系列的设计可满足外圆高精度磨削、内圆、端面和锥度零件磨削的应用，例如：传动轴，燃气轮机，航空航天部件，起落架等。



## MACHINE GSB磨床

AZ Internal grinding machine GSB is designed for internal grinding process, face grinding and taper grinding. Especially designed for aerospace field, this machine model can reach the best quality on the internal surface due to a big selection of special spindles and grinding wheels. The machine is designed with grinding wheel moves on base by ball

GSB内圆磨床是专为内圆磨削，端面磨削，锥度磨削设计的，尤其是航空领域该机型选用了大量的专用主轴和砂轮，可使内表面达到最佳质量。该磨床采用滚珠丝杠系统和直线导轨设计，砂轮在底座移动。

工件由头架和在工作台直线导轨上移动的中心





screw system and linear guideways. The workpiece is clamped by headstock and supported by steady rest moves easily on the table. Base is specifically designed to obtain the best result between structural deformations and vibration dumping. The table is realized in two cast iron parts. As optional the table can swivel CNC or manually controlled.

架夹紧。底座采用特殊设计的复合材料，在结构变形和振动减幅时达到最佳效果。工作台由两个铸铁部件组成，可选配数控或手动旋转工作台。

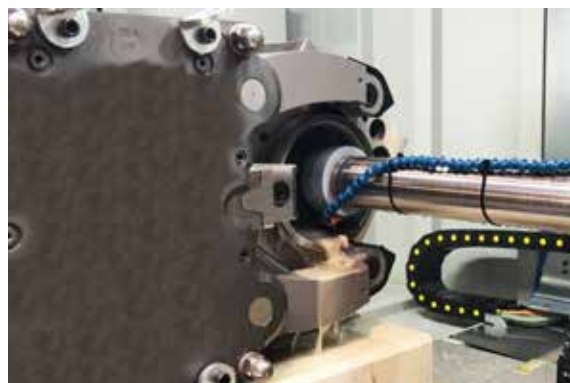
## HEADSTOCK

### 头架

The headstock is designed to use different clamping systems in accordance with the specific workpiece. The headstock can swivel manually or automatically. Headstock uses Morse cone or Asa centering system. For easy workpiece positioning, the headstock can move along table thanks to W1 CNC control axis.

头架根据特定的工件，采用不同的夹紧系统。  
主轴箱可手动或自动旋转。  
主轴箱和尾箱采用莫斯圆锥或定心系统。为方便工件定位，可数控控制W1轴使头座沿工作台移动。





The machine can be equipped with different workpiece supports that can be moved manually or automatically along the table:

- 3 points manual steady rests
- 3 points automatic steady rests

这台机器可配备不同的工件支架，  
可手动或自动沿工作台移动：

- 3点手动中心架
- 3点自动中心架

## GRINDING WHEEL HEAD

### 砂轮头

Grinding wheel carriage moves on Z and X axes by ballscrew and guideways. The grinding wheel head position is controlled by linear encoders. The wheelhead can have different configurations depending on the number of spindles requested:

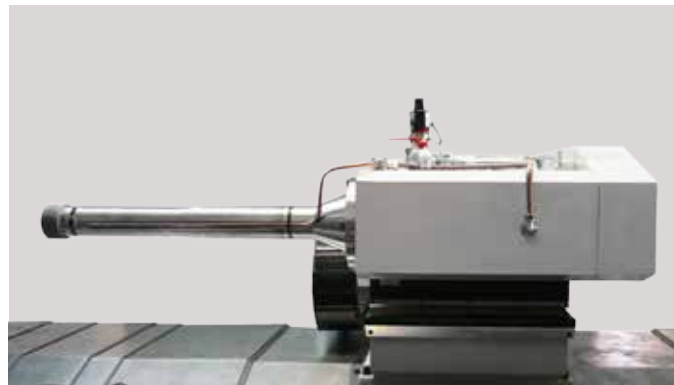
- fixed
- manually or automatically B-axis rotation

The upper part of the wheel carriage has a fixed turret, designed to be configured with various types of spindles for the different types of processes. The grinding wheel dressing is done by one single station points diamond dresser for automatic dressing of ID conventional grinding wheels.

砂轮头架通过滚珠丝杠和导轨在Z轴和X轴上移动。头架旋转定位采用全闭环线性编码器控制，根据主轴的数量可配置不同类型的砂轮头架：

- 固定
- 手动或自动B轴旋转°

机身上半部分有一个固定的旋转台，设计用于为不同类型的工艺而配置不同类型的轴，砂轮修整通过单点金刚石修整台完成ID常规砂轮的自动修整。







# CONTROL & MEASURING SYSTEM

## 控制和测量系统

The machine is equipped with  
**MODULAR MULTI-FUNCTION SYSTEM FOR GRINDING PROCESS CONTROL \***

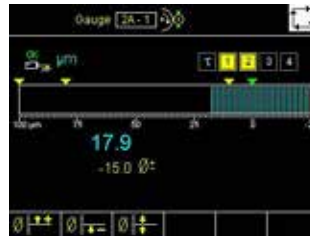
this system can be configured according to customer requests:

- grinding wheel/workpiece contact control
- grinding wheel/diamond contact control and tool usury recovery system
- crash control
- workpiece positioning control with touch probe

该磨床配有  
**控制磨削过程的多功能系统模块\***

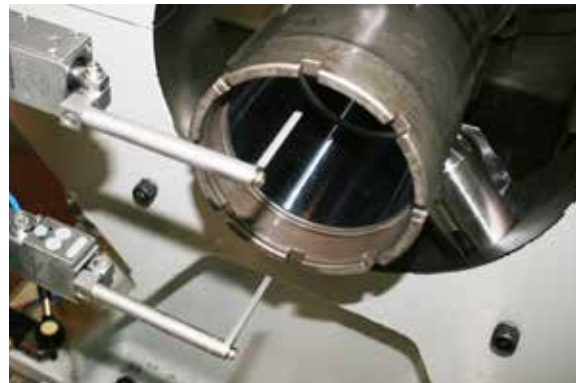
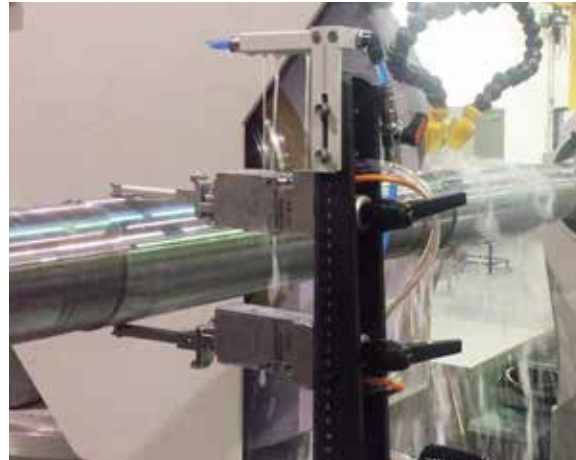
该系统可根据客户需求配置：

- 砂轮/工件接触检测控制
- 砂轮/金刚石接触检测和砂轮磨损修正系统
- 防撞控制
- 带有探针的工件定位装置





- in-process diameter control with 2 points measurement
- automatic modular gauge heads for in-process dimensional control



- 两点在线测量直径
- 模块化测头自动在线测量

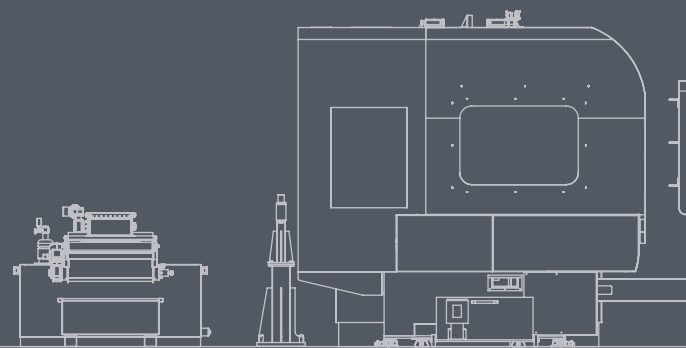
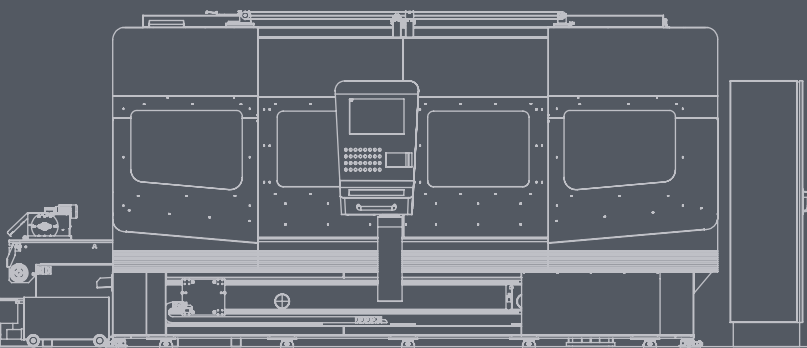
# TECHNICAL SPECIFICATIONS\*

## 技术规格\*

		<b>GSB500</b>	<b>GSB600</b>	<b>GSB800</b>
Height centers 主轴中心高	[mm]	<b>275</b>	<b>325</b>	<b>425</b>
Swing over table 工作台上最大回转直径	[mm]	<b>500</b>	<b>600</b>	<b>800</b>
Max workpiece length 最大工件长度	[mm]	<b>1000</b>	<b>1600</b>	<b>2000</b>
Max workpiece diameter 最大工件直径	[mm]	<b>400</b>	<b>500</b>	<b>700</b>
Grinding bore diameter 磨削钻孔直径	[mm]	<b>8 ÷ 300</b>	<b>25 ÷ 400</b>	<b>50 ÷ 600</b>
Bore depth 磨削孔深	[mm]	<b>250</b>	<b>800</b>	<b>1200</b>
Maximum weight admitted on headstock 磨削孔深	[kg]	<b>180</b>	<b>250</b>	<b>360</b>
Grinding wheel spindle power 头座最大工件承重	[kW]		<b>2-22</b>	
Headstock spindle power 砂轮主轴功率	[kW]		<b>2,3-3</b>	
Headstock speed range 头座转速范围	[rpm]		<b>0 ÷ 1000</b>	

\*Indicative data, definitive technical specifications are released during project phase.

\*在项目阶段发布指示性数据和最终技术规范。





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