



UNIVERSAL GRINDING MACHINES

万能磨床





# CONVENTIONAL UNIVERSAL GRINDING MACHINES

## 传统万能磨床

AZ Universal grinding machines range has been designed to fulfil the requirements of a wide range of applications that combine external, internal, face and taper grinding of components such as: transmission shafts, electric motor shaft, gas turbine shafts, railway shafts, machine tools shafts, landing gear components, etc.

AZ 万能磨床系列的设计可以满足外圆、内圆、端面和锥面零件磨削的应用，例如：传动轴、电机轴、燃气轮机轴、铁路轴、机床轴、起落架部件等。

## MACHINE 磨床

RUA is a conventional universal grinding machine PLC controlled (interpolation control G-CODE) by electronic encoders that perform multiple working functions. The machine is designed with grinding wheel moves on base by ball screw system and linear guideways. The workpiece is clamped by headstock fixed on the base and tailstock moving on table support by linear guideways. This machine configuration permits to reduce the overall machine



RUA系列传统万能磨床，采用PLC电子编码器控制系统(G代码插补控制)，具备多种操作功能。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。工件由固定在底座上的头架和在工作台直线导轨上移动的尾座夹紧。与工作台移动形式的磨床相比大幅减少了占地空间。

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。







dimensions compared to moving table configuration.  
Base is in composite material specifically designed  
to obtain the best result between structural  
deformations and vibration dumping.



## HEADSTOCK & TAILSTOCK

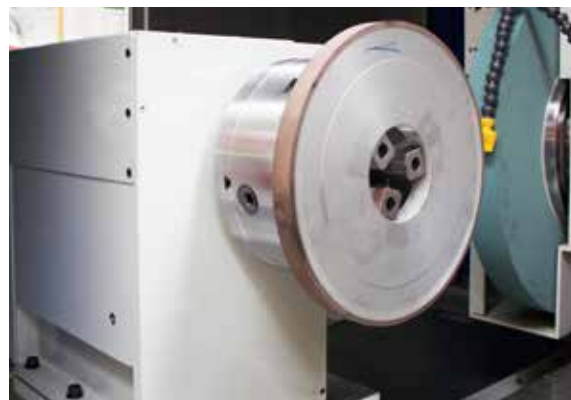
### 头架和尾座

The headstock is designed to use different clamping systems in accordance with the specific workpiece. The tailstock moves by linear guideways system and is equipped with taper adjustment with continuous control of the force between the centers.

头架可根据工件的具体情况采用不同的夹紧系统。

尾座采用直线导轨系统，并配有锥度调节和可连续控制中心的装置



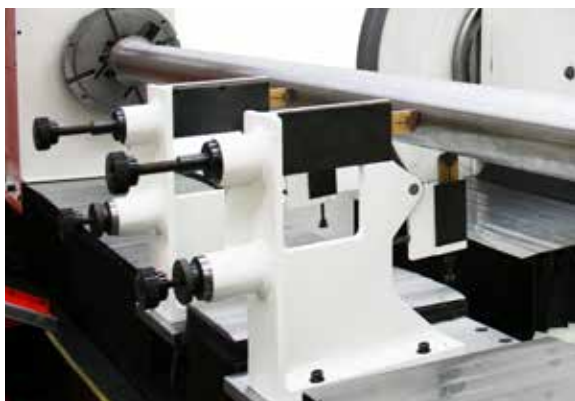


The machine can be equipped with different workpiece supports:

- 2 points manual steady rest for external grinding
- 3 points steady rests for internal grinding
- Loading and Unloading V support steady rests

该机床可配备不同的工件支架

- 外圆磨削2点手动中心架
- 内圆磨削3点中心架
- 可拆卸V型扶架



## GRINDING WHEEL HEAD

### 砂轮头

Grinding wheel carriage moves on Z and X axes by ballscrew and guideways. The grinding wheel can be equipped with automatic balancing system and vibration control. The grinding wheel dressing is made by automatic fixed point dresser mounted on the back of the headstock.

砂轮架通过滚珠丝杠和导轨在Z轴和X轴上运动。砂轮可配置自动平衡系统和振动控制系统。砂轮由安装在工件头架背面的自动定点修整器修整。







# CONTROL & MEASURING SYSTEM

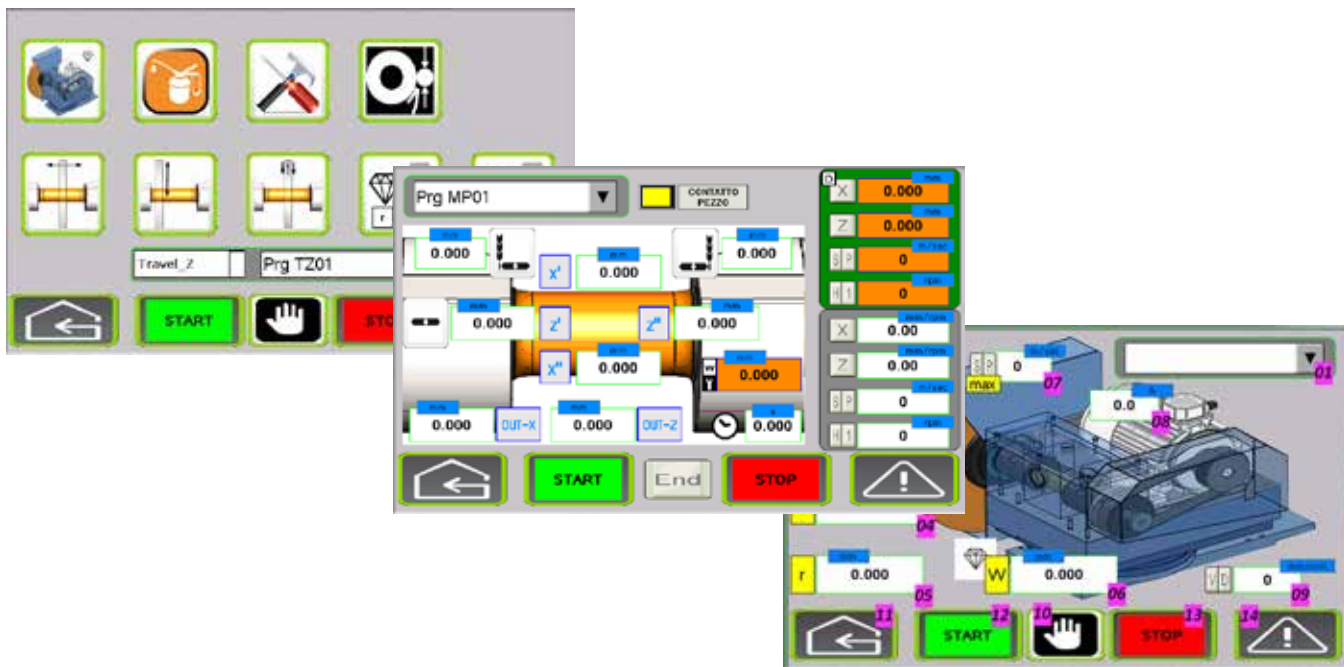
## 控制和测量系统

The machine is equipped with PLC with interpolation of X and Z axis by electronic encoders and multiple working functions:

- TOOL LIST
- PLUNGE GRINDING
- SHOULDERS GRINDING
- CYLINDRICAL GRINDING
- FRONT AND RADIUS AUTOMATIC DRESSING
- CYCLE

该机床配置的PLC系统由具备X和Z轴插补的电子编码器控制并具有多种功能：

- 刀具列表
- 成形磨削
- 挡肩磨削
- 外圆磨削
- 前、半径自动修整循环







The machine can be configured with

## MODULAR MULTI-FUNCTION SYSTEM FOR GRINDING PROCESS CONTROL \*

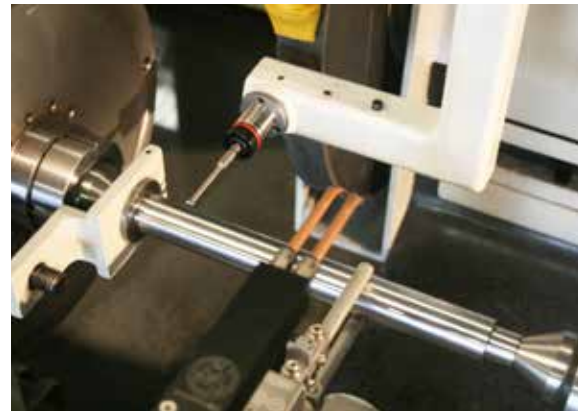
- grinding wheel/workpiece contact control
- grinding wheel/diamond contact control and crash control
- wheel balancing control with automatic balancing device
- in-process diameter control with 2 points measurement
- workpiece positioning control with touch probe

该机床可配置

## \*控制磨矿过程的多功能系统模块

- 砂轮/工件接触检测控制
- 砂轮/金刚石接触检测和防撞控制装置
- 砂轮自动平衡装置
- 2点在线直径测量装置
- 带有探针的工件定位装置





## DIFFERENT IN-PROCESS MEASUREMENT SYSTEMS \*

- digital in process journal size gauge with measuring fork manual engagement
- automatic modular gauge heads for in-process dimensional control

不同在线测量系统\*

- 配置手动量爪啮合的在线数字尺寸测量仪表
- 在线尺寸控制自动模块化仪表



*\*All measuring equipments are optional*

*\*所有测量装置都是选配*



TECHNICAL SPECIFICATIONS\*

技术规格\*

		RUA1000	RUA1600	RUA2000	RUA2500	RUA3000	RUA3500
Height centers 主轴中心高	[mm]	225	275	300	300	400	400
Swing over table 工作台上最大回转直径	[mm]	400	500	550	550	700	700
Distance between centers 顶尖距	[mm]	1000	1600	2000	2500	3000	3500
OD Grinding wheel diameter range 外径加工范围	[mm]	508-760					
Width of grinding wheel 砂轮宽度	[mm]	from 10÷140					
Maximum weight between centers 工作台最大承重	[kg]	160	250	500	500	1500	1500
Grinding wheel spindle power 砂轮主轴功率	[kW]	from 7 to 15					
Headstock spindle power 头架主轴功率	[kW]	from 2.3 to 3.6					
Headstock speed range 头架转速范围	[rpm]	5-400					

\*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。

# EQUIPMENT

## 设备

### STANDARD

X and Z axis movement by ballscrew system  
PLC Control system  
Variable speed of the headstock  
Centralized lubricant system  
Driving Dogs + driving plates  
Conic centers + blunt center  
Wheel balancing shaft  
Grinding wheel hub puller  
Guarding conforming to CE standard  
Service tools and Operating manual

### 标准配置

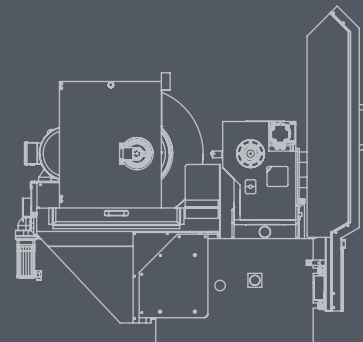
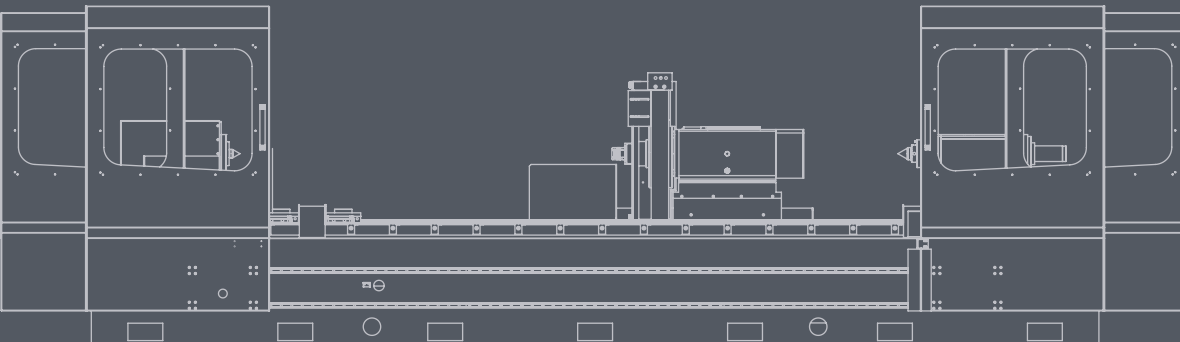
X轴和Z轴的运动采用滚珠丝杠系统  
PLC控制系统  
头架变速  
集中润滑系统  
拨爪+拨盘  
中心顶尖+伞形顶尖  
砂轮平衡芯轴  
砂轮法兰拉钉

### OPTIONAL

as per customer request

### 选配

根据客户需求





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