

福泰德

Fortida[®]

非标刀具

科学切削

Cutting Tools Expert



数控刀具

CNC Cutting Tools



刀具检测仪

Tool Tester



五轴工具磨床

5-Axis Tool Grinder

NON-STANDARD TOOL
PRODUCTION SERVICE PROVIDER

非标刀具生产服务商

福泰德(北京)精密工具有限公司

FORTIDA(Beijing)Precision Tools Co., Ltd.



FORTIDA

公司简介 Company Profile



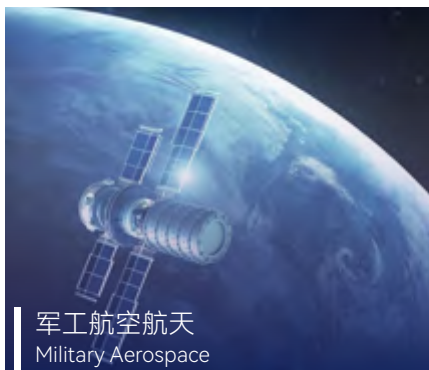
福泰德（北京）精密工具有限公司
FORTIDA(Beijing)Precision Tools Co., Ltd.

本公司致力于
高端数控刀具制造与修磨
刀具检测仪
五轴工具磨床等
设备研发与销售及设备的售后服务、产品进出口等业务；

The company is committed to high-end CNC tool manufacturing and resharpening, tool tester and five-axis tool grinder and other equipment development and sales and equipment after-sales service, product import and export business;



应用领域 Application Areas

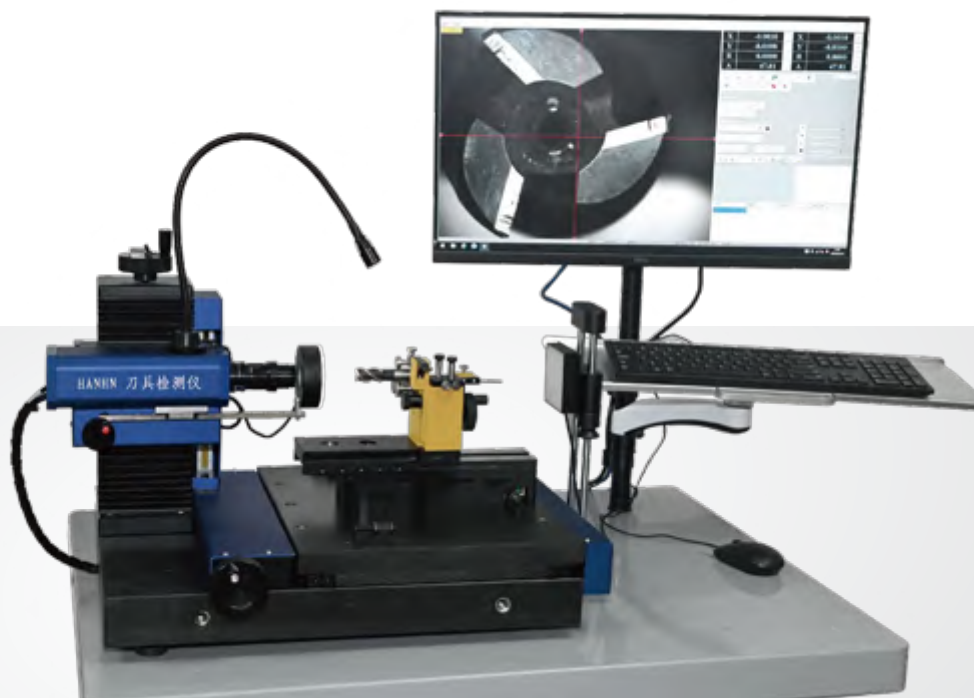


五轴工具磨床
可满足各种数控刀具的制造与修磨需求

Five-axis tool grinder meets the manufacturing and resharpenering needs of a wide range of CNC tools

刀具检测仪

Cutting tool tester

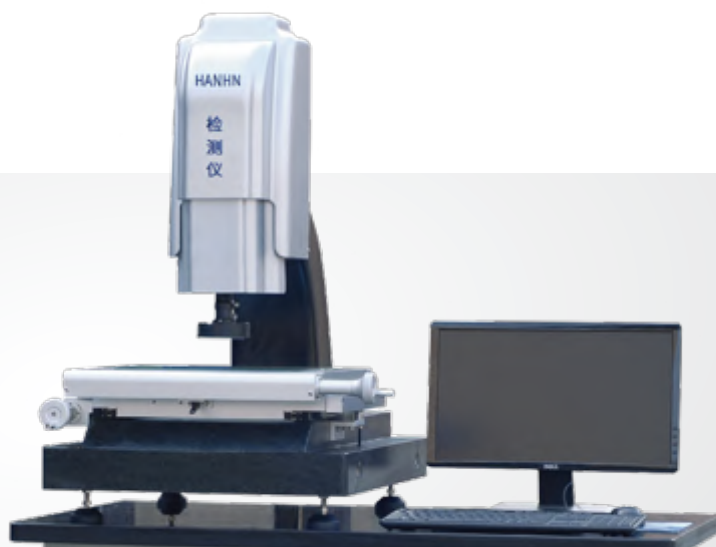


- 钻头：螺旋角刃带宽、刃宽、后角、主切削刃前角、内刃后角、顶角、退刀角、刃高差、横刃跳动、后刀面宽、B值、C值、刀尖倒角角度、刀尖宽度、进刀半径、横刃宽、进刀角、分屑槽参数、钻头槽型、端面DXF整体对比提供高效快捷的方式；
- Drill bits: helix angle flute bandwidth, flute width, back angle, main cutting edge front angle, internal flute back angle, top angle, receding angle, flute height difference, cross cutting edge runout, back face width, B-value, C-value, tip chamfering angle, tip width, feed radius, cross flute width, feed angle, chipformer flute parameter, drill bit groove type, and overall comparison of the DXF of the endface provide a highly efficient and quick way to compare the results;
- 铣刀：槽前角、后角、槽深、芯厚、螺旋槽、刃带宽、刃宽、端刃第1/2后角、端刃前角、长刃过中心、端齿容屑槽参数、锥度、圆弧、倒角大小等、铣刀蝶形角、铣刀端刃前角、GASH角、刃过中心量、铣刀来料检验等；
- Milling cutter: Slot front angle, back angle, slot depth, core thickness, helical groove, edge band width, edge width, 1/2 back angle of end edge, front angle of end edge, long edge over center, parameters of chip holding groove of end tooth, taper, rounding, chamfer size, etc., butterfly angle of milling cutter, front angle of end edge of milling cutter, GASH angle, cutting edge over center, incoming inspection of milling cutter;

刀具检测仪测量功能 Tool Tester Measurement Functions

- 铰刀：螺旋角、槽深、前角、芯厚、刃带宽、倒角等参数。
 - 丝锥：先端倒角、槽型、前角、后角、牙型角、螺距、大小中径等数据的测量；
 - 刀片：采用V型夹具进行交夹或装在圆柱刀体上测量，倒角、前角、后角、圆角。
 - PCD焊接刀具：各个PCD刀片焊接后的实质前角、后角、刃倾角、对称刃的对称性，复杂的成型刀具：可以导入CAD图型，全程跟踪对比测量，随相机一起放大一起缩小。
 - 外观缺陷检查：可以在不同的放大倍数下看到实际的刀具表面是否有缺陷。
 - 枪钻检测、阶梯长度测量、轮廓比对功能、CAD图纸输入及数据存储、拍照等。
- ◉ Reamers: Helix angle, groove depth, front angle, core thickness, edge bandwidth, chamfer, and other parameters.
 - ◉ Tap: Measurement of data such as apex chamfer, groove type, front angle, back angle, tooth angle, pitch, size and center diameter;
 - ◉ Blades: Cross-clamped or mounted on cylindrical cutter body measured by V-jig, chamfered, front, rear and rounded corners.
 - ◉ PCD welding tool: each PCD blade after welding the substantial front angle, back angle, edge inclination, symmetry of the symmetry of the edge, complex molding tool: can be imported into the CAD pattern, the whole tracking comparison measurements, zoom in and out with the camera.
 - ◉ Appearance Defect Inspection: The actual tool surface can be seen for defects at different magnifications.
 - ◉ Gun drill inspection, step length measurement, contour comparison function, CAD drawing input and data storage, photo taking, etc.

二次元检测仪 Two-Dimensional Tester



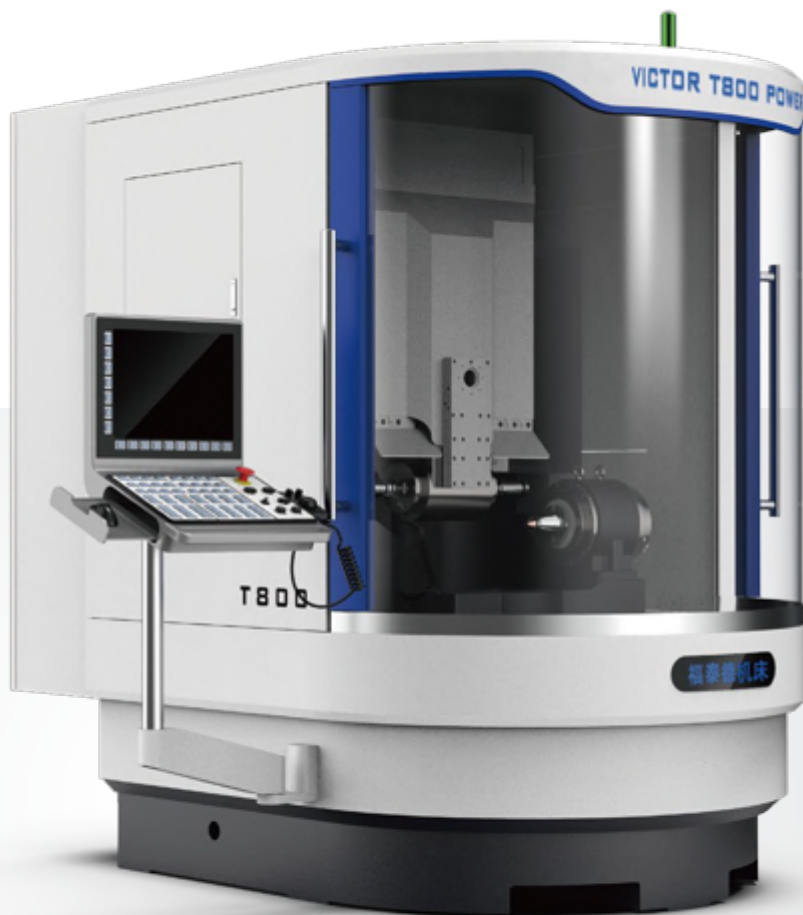
用来测量被测要素的形位公差，如位置度、同心度、直线度、轮廓度、圆度和与基准有关的尺寸等，主要用于较薄产品（如弹片）及较小产品的二维平面检测或其它工件的二维投影检测。

Used to measure the shape and positional tolerance of the measured elements, such as position, concentricity, straightness, contour, roundness and dimensions related to the benchmark, etc. It is mainly used for the two-dimensional plane inspection of thinner products (e.g., shrapnel) and smaller products, or the two-dimensional projection inspection of other workpieces.

T800

五轴数控工具磨床

T800 5-axis CNC tool grinder



实用 经济 操作
Practical, Economical, Operational



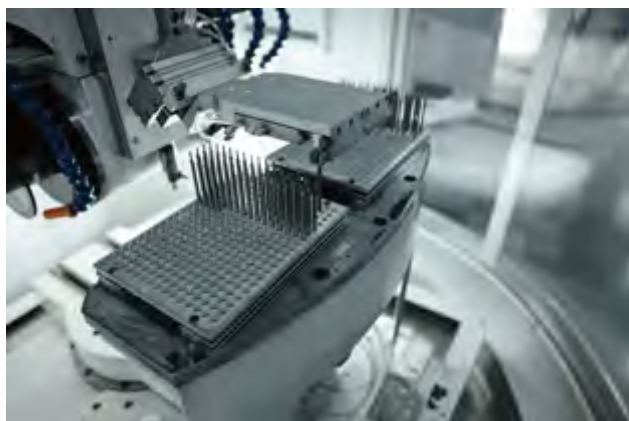
维修 高效 稳定
Maintenance, Efficient, Stable

本公司生产的五轴五联动数控工具磨床,是根据国外先进五轴数控工具磨床的经验与理论,经由设计人员融入实际操作,并与刀具生产现场充分交流,最终确认定型,在实用、经济、操作、维修、高效及稳定性等都得到体现。

The five-axis, five-linkage CNC tool grinder produced by our company is based on the experience and theories of advanced five-axis CNC tool grinder from abroad, which is integrated into the actual operation by the designers and fully exchanged with the cutting tool production site, and finally confirmed and finalised, which is reflected in the practicality, economy, operation, maintenance, high efficiency and stability.

主要技术参数 Main technical parameters

项目Project	参数Parametric
XYZ 轴快速位移 / Quick movement (X/Y/Z axis)	7.5m/min
夹持最小工件直径 / Minimum diameter for clamping workpiece	3mm
夹持最大工件直径 / Maximum diameter for clamping workpiece	20mm
夹持最大工件长度 / Maximum length for clamping workpiece	200mm
磨削最小工件直径 / Minimum diameter for grinding workpiece	1mm
磨削最大工件直径 / Maximum diameter for grinding workpiece	20mm(选配32mm) (optional:32mm)
磨削最大工件长度 / Maximum blade length for grinding	>160mm
夹持最大工件重量 / Maximum workpiece weight	5kg
刀柄型式 / Shank type	肖柏林W25或BT50 Shaw Berlin W25 or BT50
直线分辨率 / Linear resolution	0.001mm
直线重复定位精度 / Linear repeat positioning accuracy	0.003mm
旋转分辨率 / Rotation resolution	0.001mm
旋转重复定位精度 / Rotation Repetitive Positioning Accuracy	0.001度(degree)
主轴功率 / Spindle power	标配:18KW(可选配 30KW) Standard:18KW(optional:30KW)
砂轮直径 / Grinding wheel diameter	45-150mm
砂轮主轴转速 / Grinding wheel spindle speed	4000-8000rpm
砂轮杆型式 / Stepless adjustable	HSK50F-31.75mm / 20mm
机器重量 / Machine weight	约 5500kg approx:5500kg
总功率 / Total power	30kw(选配45KW) (optional:45KW)





主要配置 Main configurations

- X 轴水平直线数控轴,新加坡 Akribis 直线电机,THK 精密型滚柱型导轨
 - Y 轴水平直线数控轴,新加坡 Akribis 直线电机,THK 精密型滚柱型导轨
 - Z 轴垂直直线数控轴,新代伺服电机,THK精密滚珠丝杆,THK 精密型滚柱型导轨
 - A 轴:工件旋转分度轴采用 DD 直驱
 - C 轴:旋转分度轴采用 DD 直驱
 - 高精度轴承固定座
 - 主结构件床身及立柱采用矿物铸造大理石
 - 测头系统: 万向探针
 - 全封闭式圆弧型板金
 - 砂轮主轴双磨头设计(SHK50F 接口/BT50 油压刀柄)
 - 砂轮连接法兰Φ31.75 mm
- ⊙ X-axis Horizontal Linear CNC Axis, Akribis Linear Motor, Singapore, THK Precision Roller Guideway
 - ⊙ Y-axis Horizontal Linear CNC Axis, Akribis Linear Motor, Singapore, THK Precision Roller Guideway
 - ⊙ Z-axis Vertical Linear CNC Axis, New Generation Servo Motor, THK Precision Ball Screws, THK Precision Roller Guideways
 - ⊙ A-axis: Workpiece rotary indexing axis with DD direct drive
 - ⊙ C-axis: rotary indexing axis with DD direct drive
 - ⊙ High Precision Bearing Retainer
 - ⊙ Mineral cast marble for the main structural elements of the bed and column.
 - ⊙ Probe system: Universal probe
 - ⊙ Fully enclosed circular plate gold
 - ⊙ Dual grinding head design for wheel spindle (SHK50F interface/BT50 hydraulic shank)
 - ⊙ Grinding wheel connecting flange Φ31.75mm

T600

五轴数控工具磨床

T600 5-axis CNC tool grinder



本公司生产的五轴五联动数控工具磨床,是根据国外先进五轴数控工具磨床的经验与理论,经由设计人员融入实际操作,并与刀具生产现场充分交流,最终确认定型,在实用、经济、操作、维修、高效及稳定性等都得到体现。

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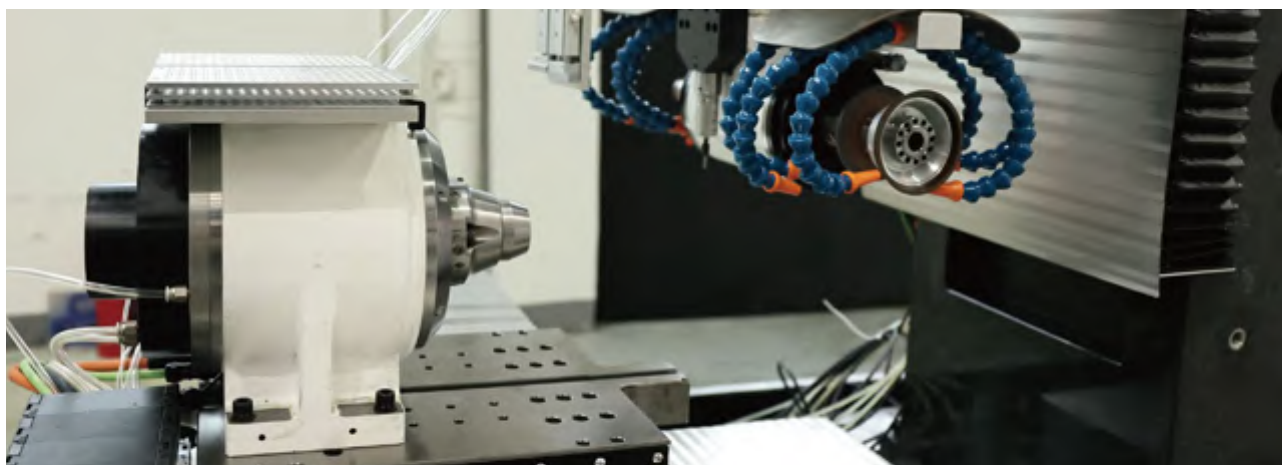
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夹持最小工件直径 / Minimum diameter for clamping workpiece	3mm
夹持最大工件直径 / Maximum diameter for clamping workpiece	20mm
夹持最大工件长度 / Maximum length for clamping workpiece	200mm
磨削最小工件直径 / Minimum diameter for grinding workpiece	1mm
磨削最大工件直径 / Maximum diameter for grinding workpiece	12mm (选配20mm) (optional:20mm)
磨削最大工件长度 / Maximum blade length for grinding	>180mm
夹持最大工件重量 / Maximum workpiece weight	5kg
刀柄型式 / Shank type	肖柏林 W25/BT50油压刀柄 Shaw Berlin W25/BT50 Hydraulic Toolholders
直线分辨率 / Linear resolution	0.001mm
直线重复定位精度 / Linear repeat positioning accuracy	0.003mm
旋转分辨率 / Rotation resolution	0.001mm
旋转重复定位精度 / Rotation Repetitive Positioning Accuracy	0.001度(degree)
主轴功率 / Spindle power	标配:11KW(选配18KW) Standard:11KW(optional:18KW)
砂轮直径 / Grinding wheel diameter	45-150mm
砂轮主轴转速 / Grinding wheel spindle speed	4000-10000rpm
砂轮杆型式 / Stepless adjustable	HSK50F-31.75mm
机器重量 / Machine weight	约 4200kg approx:4200kg
总功率 / Total power	20kw(选配30KW) (optional:30KW)



机床特点 Machine features

- 机械设备结构合理化优化机器设备空间
 - 采用进口之直线导轨及高精密丝杆确保机床之定位精度
 - 机床床身与机床之结构合理，确保机床之刚性与稳定性
 - 采用永磁同步双头输出电主轴功率大，恒扭矩输出、效率高，可同时装夹6-8片砂轮可满足开粗与抛光一次装夹一次加工完成
 - 主轴型式：永磁同步
 - 机器设备结构合理，优化机器设备空间充分利用
 - 机身及床身皆为铸件结构，确保机床刚性及稳定性
 - 直线导轨及C3级丝杆，确保机床定位精度
 - A/C轴采用DD直驱马达，零间隙、无磨损、分度精准，可高速在在线修整砂轮
 - 全自动装夹提升产品研磨装夹之稳定性，更可以大大节省人力资源
 - 采用肖柏林W25型筒夹座/BT50油压刀柄(两种可以互换)
- ⊙ Rationalisation of machinery and equipment structures to optimise machine and equipment space
 - ⊙ Imported linear guides and high precision screws are used to ensure the positioning accuracy of the machine.
 - ⊙ Reasonable structure of machine bed and machine ensures the rigidity and stability of the machine.
 - ⊙ Adopt permanent magnet synchronous double-head output spindle with high power, constant torque output, high efficiency, can simultaneously clamp 6-8 pieces of grinding wheels, can meet the roughing and polishing in one clamping to complete the machining in one go.
 - ⊙ Spindle type: permanent magnet synchronous
 - ⊙ Reasonable machine and equipment structure, optimising the full use of machine and equipment space
 - ⊙ The machine body and bed are cast to ensure machine rigidity and stability.
 - ⊙ Linear guideways and C3 class screws ensure machine positioning accuracy.
 - ⊙ A/C axis adopts aDD direct drive motor, zero clearance, no wear, accurate indexing, high speed in-line dressing grinding wheel.
 - ⊙ Fully automatic clamping improves the stability of product grinding clamping and saves human resources.
 - ⊙ Adoption of Shaw Berlin W25 type collet holder / BT50 hydraulic shank (both can be interchanged)





让福泰德与您携手共同走向世界

让世界了解福泰德与您

Let Fortida go global with you!
Let the world know about Fortida and you



服务于高端装备制造业

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