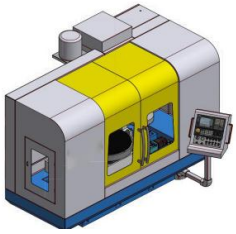
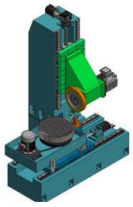


我司提供的磨床有内外圆磨床、各类平面磨床、砂轮修整磨床等。其中圆台平面磨床的介绍如下：

设备原理及构造：设备采用磨头在拖板上作往复运动拖板在立柱导轨上作垂直运动的形式。设备电器采用进口，导轨采用力士乐，工作台采用比较新设计，提高设备稳定性和精度。床身、立柱等铸件全部采用二次回火消应力处理材质好、强度高，保证设备的稳定性。

优势：进给数控控制系统，参数设置简单易会。设定尺寸后，自动检测对刀、自动分辨、自动磨削、自动补偿、自动磨削量。工作台装有自动充退磁装置，具有磁力可调、失磁保护等功能。铸件刚性强，高度低操作方便。

用途：适合圆台平面磨削，本机主要磨削圆形端面、平面加工件。（根据需要可定制)

适用行业：锯片厂、汽配厂、轴承厂、发动机厂、工具厂、摩擦片厂、活塞厂、陶瓷密封件厂和一般机械厂的产品车间和工具车间，磨削加工精密零件；

特点：

1、加工产品适应性强；

2、加工精度高，工件厚度差距保持在 0.003mm 以内，加工后表面粗糙度可达到 Ra 为 0.4 μm。

3、加工产品不变形，尺寸统一性好；

4、操作者劳动强度低，一人控制多机，降低劳动力成本；

5、生产效率高,经济效益好；

6、磨床保养维修简单；

7、便于生产管理现代化。

其他设备信息详见后面页面内容。

Round table surface grinder has two structural forms, one is a vertical rotary table surface grinder, one is horizontal rotary table surface grinder. Vertical lines of vertical circular grinder grinding, circular magnetic table, using the surface of the workpiece face grinding wheel, high processing efficiency. Round table surface grinder is suitable for generators, tools, bearings, magnetic materials, refractory materials, molds, die blanks, machinery and other industries where the need for surface grinding. Horizontal lines of horizontal rotary table surface grinder grinding, using a grinding wheel perimeter of the workpiece grinding, high precision machining. Ring for grinding parts, valves, blade, cutter and other tools, and

precision parts machining, are widely used tools, bearings, saw, air compressor plant and other machinery manufacturing companies grinding precision parts .

数控卧轴圆台平面磨床 RSGG7340

设备原理及构造：RSGG7340 采用磨头在拖板上作往复运动拖板在立柱导轨上作垂直运动的形式。设备电器采用进口，导轨采用力士乐，工作台采用比较新设计，提高设备稳定性和精度。床身、立柱等铸件全部采用二次回火消应力处理材质好、强度高，保证设备的稳定性。

优势：自主研发磨床进给数控控制系统，参数设置简单易会。设定尺寸后，自动检测对刀、自动分辨、自动磨削、自动补偿、自动磨削量。工作台装有自动充退磁装置，具有磁力可调、失磁保护等功能。铸件刚性强，高度低操作方便。

用途：适合圆台平面磨削，本机主要磨削直径 φ400 范围内的圆形端面、平面加工件。（根据需要可定制)

适用行业：锯片厂、汽配厂、轴承厂、发动机厂、工具厂、摩擦片厂、活塞厂、陶瓷密封件厂和一般机械厂的产品车间和工具车间，磨削加工精密零件；

特点： 1、加工产品适应性强；2、加工精度高，工件厚度差距保持在 0.003mm 以内，加工后表面粗糙度可达到 Ra 为 0.4 μm。3、加工产品不变形，尺寸统一性好；4、操作者劳动强度低，一人控制多机，降低劳动力成本；5、生产效率高,经济效益好；6、磨床保养维修简单；7、便于生产管理现代化。

数控卧轴圆台平面磨床 RSGG-HV 7340 （高速）

设备原理及构造：RSGG-HV 7340 采用磨头在拖板上作往复运动拖板在立柱导轨上作垂直运动的形式。床身、立柱等铸件全部采用二次回火消应力处理材质好、强度高，保证设备的稳定性。

优势：磨床采用专用数控控制系统，参数设置简单易会。一键操作，自动对刀、自动计算磨削刃，是磨削更均匀，减少变形量，加工更精准，高效率生产。设备采用高速（CBN）砂轮加工两端面，提优质面光洁度。尺寸统一,特别是台阶面的磨削。工作台装选用静压磨头。。操作系统自主研发，目前已是比较方便、比较人性化操作。有强大的售后保障。

特点：

1、加工产品适应性强；

2、加工精度高，工件厚度差距保持在 0.003mm 以内，加工后表面粗糙度可达到 Ra 为 0.4 μm。

3、加工产品不变形，尺寸统一性好；

4、操作者劳动强度低，一人控制多机，降低劳动力成本；

5、生产效率高,经济效益好；

6、磨床保养维修简单；

7、便于生产管理现代化。

RSGG7340 horizontal axis rotary table surface grinder is my company absorb advanced grinding machine structure and manufacturing technology to develop a new series of horizontal-axis rotary table surface grinder. Working round table diameter ф400mm, using the table in the bed rotation frequency, the carriage moves back and forth along a horizontal, vertical grinding head carriage moves along the feed layout patterns. Grinding spindle bearings with precision bearings, good rigidity, high accuracy.

Bed, column layout on linear guides and ball drive unit, using precision positioning servo motor. Stable overall structure is compact, high accuracy, reliable performance, good manufacturing processes, and easy to operate.

Using peripheral grinding wheel, the workpiece can get up and down the two planes parallel precision, dimensional accuracy and surface roughness. This machine is suitable for grinding circular parts, valves for precision machining, saw blades, cutters and other tools, tool.

数控卧轴圆台平面磨床 RSGG-HVHP 7340（高精）

设备原理及构造：RSGG-HVHP7340 采用磨头在拖板上作往复运动拖板在立柱导轨上作垂直运动的形式。床身、立柱等铸件全部采用二次回火消应力处理材质好、强度高，保证设备的稳定性。

优势：自主研发磨床进给数控控制系统，参数设置简单易会。一键操作，自动对刀、自动计算磨削刃，是磨削更均匀，减少变形量，加工更精准，高效率生产。设备采用高速（CBN）砂轮加工两端面，提优质面光洁度。尺寸统一,特别是台阶面的磨削。工作台装有自动充退磁装置，具有磁力可调、失磁保护等功能。设备选择静压磨头，采用进口导轨。操作系统自主研发，目前已是比较方便、比较人性化操作。有强大的售后保障。

特点：1、加工产品适应性强；2、加工精度高，工件厚度差距保持在 0.003mm 以内，加工后表面粗糙度可达到 Ra 为 0.4 μm。3、加工产品不变形，尺寸统一性好；4、操作者劳动强度低，一人控制多机，降低劳动力成本；5、生产效率高,经济效益好；6、磨床保养维修简单；7、便于生产管理现代化。 8、适用于高精工件加工。

主要技术规格	轴承	静压	高速	高速高精
Main TechnicaL Specifications	RSGG-B7340	RSGG-HS7340	RSGG-HV7340	RSGG-HVHP7340
工作台直径（mm） Diameter Of Work Table（mm）	Φ400	Φ400	Φ400	Φ400
磨削工件最大尺寸 Maximum Size Of Grinding Workpiece（mm）	Φ400*100	Φ400*100	Φ400*100	Φ400*100

工作台转速（rpm） Revoving Speed Of Work Table （rpm）	0～300	0～300	0～300	0～300
工作台最大承重（kg） Maximum Load-bearing Of Work Table（kg）	50	50	50	50
托板往复速度 X 轴 (m/s) Reciprocating Speed Of The Dragging Plate X Axis (m/s)	6	6	6	6
托板往复行程（mm） Reciprocating Speed Of Dragging Plate （mm）	200	200	5200	200
砂轮主轴转速(rpm) Speed Of Main Spindle Of Grinding Wheel (rpm)	1450	1450	2850	2850
主轴定心锥面跳动（mm） Runout Of Centering Conical Surface Of Main spindle（mm）	0.003	0.002	0.002	0.001
砂轮尺寸（mm） Dimensions Of Grinding Wheel（mm）	Φ350x40xΦ127	Φ350x40xΦ127	Φ350x40xΦ127	Φ350x40xΦ127
垂直快速升降 (mm/min) Vertical Rapid Going Up And Down(mm/min)	200	200	200	200
垂直进给最小进给量（mm） Minimum Amount OF Feed Of Vertical Feed （mm）	0.001	0.001	0.001	0.001
加工平面度（mm） Processing Planeness （mm）	0.005/1000	0.005/1000	0.005/1000	0.002/1000
工作台端面跳动（mm） End Face Runout Of Work	0.005	0.005	0.005	0.005

Table （mm）				
工作台电机功率(kw) Motor Power Of Work Table (kw)	2.2	2.2	2.2	2.2
砂轮主轴电机功率(kw) Motor Power Of Main Spindle Of Grinding Wheel (kw)	5.5	7.5	11	11
垂直升降伺服电机(n.m) Servo Motor For Verticai Going Up And Down(n.m)	10	10	10	10
工作台往复伺服电机(n.m) Servo Motor For Fen Reciprocation Of Work Table(n.m)	10	10	10	10
水泵电机功率 Motor Power Of Water Pump(w)	250	250	250	250
机床净重(kg) Net Weight (kg)	3500	3500	3500	3500

RSGG7340 horizontal axis rotary table surface grinders, bed, column, pallet, etc. all use resin sand casting foundry, good material, high strength. Grinding using bearing structure, contact rigidity, high precision movement, vibration absorption and stability than conventional bearing structure. Important parts of the machine, such as spindle bearings, ball and rolling element deputy, electrical components and other purchased parts, are used name brand manufacturers products, reliable quality, easy to maintain.

1, RSGG7340 horizontal axis CNC rotary table surface grinder grinding reciprocate use in the column, as in the form of linear motion of the carriage on the rail bed.
2, grinding rigid bearing (hydraulic) structure spindle design, 5.5 (7.5) KW motor, maximum speed 1450rpm. Wheel Model (Φ350 × 40 × Φ127mm).
3, electromagnetic table, diameter Φ400mm, table with centering bearing positioning, rotating in a fixed position, using the plane bearing rotation. By the motor through the gear box, Ribbed, Ribbed wheel drive, motor power 2.2KW4 level. Table speed 40-460R / MIN adjustable.
4, cross feed and vertical feed device, by a servo motor (≥10N.m), gear box, ball screws, linear guides. In which the vertical axis has a brake or self-locking device, and with a grating absolute coordinate positioning.
5, grinders are set at each rail lubrication points are lubricated by an electric lubrication pump. For the table with a separate supply tank, into the back line through the towline

rational distribution.

6, magnetic chuck using copper coil design, the surface faceplate design using concentric circles and cut flowers, customers can also customize the faceplate. Surface magnetic uniform and equipped with an automatic charge demagnetization device with a magnetic adjustable-loss protection and other functions.

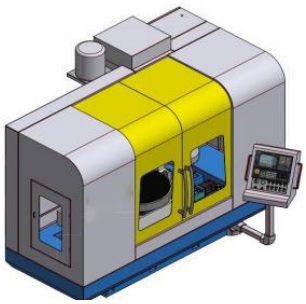
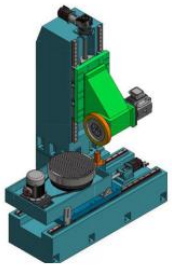
7, the cooling water tank with 100L magnetic separator, cooling circuit via the towline of cool location. Magnetic separation motor power 0.12KW, coolant pump motor power 0.25KW.

8, using an independent electrical cabinet, independent console, CNC system control, two-axis, automatic control, auto-complete cycle of grinding.

list	content	unit	numerical value
Number of axes	ruling spindle		X\Z\B
	couple axle		X\B
Operating stroke	The workbench mobile [X axes]	mm	200
	Speed of the workbench [X axes]	m/min	6
	Wheelhead movement [Z axes]	mm	200
	Wheelhead quick lifting [Z axes]	mm	200
Workbench	Countertops form		magnetic chuck rotary table
	Countertops size	mm	Φ400
	maximum load	KG	50
Resolution ratio	X spindle	mm	0.001
	Z spindle	mm	0.001
Spindle	conical degree		ISO 1：5
	range of spindle speed	rpm	1450
	radial pulsation on internal cone surface	rpm	0.003
	grinding wheel	mm	Φ350×40×Φ127
Move	X\Z spindle quick travel	m/min	6\6
	B spindle Workbench turning speed	rpm	10-120
	X\Z spindle Cutting feed	mm/min	200
motor power	spindle motor	KW	5.5kw
	B spindle workbench motor	KW	2.2KW
	X spindle motor	KW	servo 10Nm
	Z spindle motor	KW	servo 10Nm
	water pump motor	KW	0.25
Precision	X\Z positional accuracy	mm	0.01/300，0.005/300
	X\Z repeat accuracy	mm	0.01/1000，0.01/1000
	Workbench End-Surface Runout	mm	0.002
Guide rail	X Axis		2 linear guide rail
	Z Axis		2 linear guide rail

Lead screw	X\Z spindle diameter	mm	Φ50×2/Φ50×2
	X\Z spindle pitch	mm	10
	nut		ball nut
Oil tank	cooling system	L	80
	hydraulic system	L	80
	lubrication system	L	4
Machine Specifications	air pressure	Mpa	0.6-0.7
	power capacity	KVA	About 20
	numerical control system		panasonic touch screen
	equipment size	mm	2500×990×2200
	gross weight of equipment	KG	about3400

数控卧轴圆台平面磨床 RSGF 7380

设备原理及构造： RSGF 7380 采用磨头在拖板上作往复运动拖板在立柱导轨上作垂直运动的形式。设备电器采用进口，导轨采用力士乐，工作台采用比较新设计，提高设备稳定性和精度。床身、立柱等铸件全部采用二次回火消应力处理材质好、强度高，保证设备的稳定性。

优势： 自主研发磨床进给数控控制系统，参数设置简单易会。设定尺寸后，自动检测对刀、自动分辨、自动磨削、自动补偿、自动磨削量。工作台装有自动充退磁装置，具有磁力可调、失磁保护等功能。铸件刚性强，高度低操作方便。

用途：适合圆台平面磨削，本机主要磨削直径 φ800 范围内的圆形端面、平面加工件。（根据需要可定制)

适用行业：锯片厂、汽配厂、轴承厂、发动机厂、工具厂、摩擦片厂、活塞厂、陶瓷密封件厂和一般机械厂的产品车间和工具车间，磨削加工精密零件；

特点： 1、加工产品适应性强；2、加工精度高，工件厚度差距保持在 0.003mm 以内，加工后表面粗糙度可达到 Ra 为 0.4 μm。3、加工产品不变形，尺寸统一性好；4、操作者劳动强度低，一人控制多机，降低劳动力成本；5、生产效率高,经济效益好；6、磨床保养维修简单；7、便于生产管理现代化。

数控卧轴圆台平面磨床 RSGF-HV 7380 （高速）

设备原理及构造：RSGF-HV 7380 采用磨头在拖板上作往复运动拖板在立柱导轨上作垂直运动的形式。床身、立柱等铸件全部采用二次回火消应力处理材质好、强度高，保证设备的稳定性。

优势：磨床采用专用数控控制系统，参数设置简单易会。一键操作，自动对刀、自动计算磨削刃，是磨削更均匀，减少变形量，加工更精准，高效率生产。设备采用高速（CBN）砂轮加工两端面，提优质面光洁度。尺寸统一,特别是台阶面的磨削。工作台装选用静压磨头。。操作系统自主研发，目前已是比较方便、比较人性化操作。有强大的售后保障。

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数控卧轴圆台平面磨床 RSGF-HVHP 7380（高精）

设备原理及构造：RSGF-HVHP 7380 采用磨头在拖板上作往复运动拖板在立柱导轨上作垂直运动的形式。床身、立柱等铸件全部采用二次回火消应力处理材质好、强度高，保证设备的稳定性。

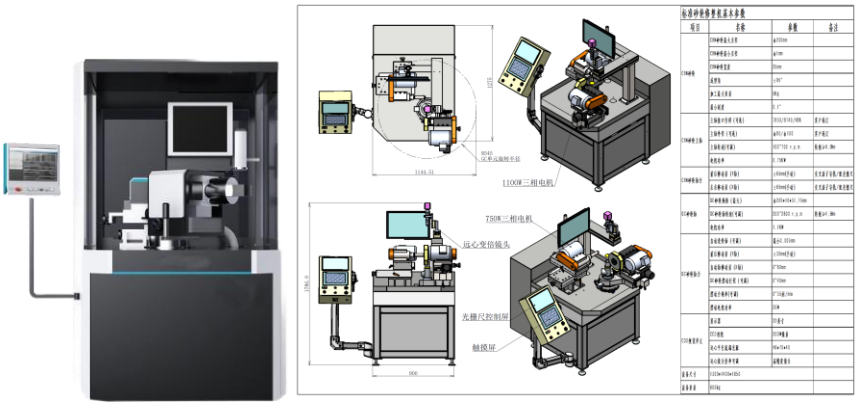
优势：自主研发磨床进给数控控制系统，参数设置简单易会。一键操作，自动对刀、自动计算磨削刃，是磨削更均匀，减少变形量，加工更精准，高效率生产。设备采用速（CBN）砂轮加工两端面，提优质面光洁度。尺寸统一,特别是台阶面的磨削。工作台装有自动充退磁装置，具有磁力可调、失磁保护等功能。设备选择静压磨头，采用进口导轨。操作系统自主研发，目前已是比较方便、比较人性化操作。有强大的售后保障。

特点：1、加工产品适应性强；2、加工精度高，工件厚度差距保持在 0.003mm 以内，加工后表面粗糙度可达到 Ra 为 0.4 μm。3、加工产品不变形，尺寸统一性好；4、操作者劳动强度低，一人控制多机，降低劳动力成本；5、生产效率高,经济效益好；6、磨床保养维修简单；7、便于生产管理现代化。 8、适用于高精工件加工。

主要技术规格	静压	高速	高精度
Main TechnicaL Specifications	RSGF-HS 7380	RSGF-HV 7380	RSGF-HVHP 7380
工作台直径（mm） Diameter Of Work Table（mm）	Φ800	Φ800	Φ800
磨削工件最大尺寸 Maximum Size Of Grinding Workpiece（mm）	Φ800*100	Φ800*100	Φ800*100
工作台转速（rpm） Revoving Speed Of Work Table（rpm）	0～280	0～280	0～280
工作台最大承重（kg） Maximum Load-bearing Of Work Table（kg）	1500	1500	1500
托板往复速度 X 轴(m/s) Reciprocating Speed Of The Dragging Plate X Axis (m/s)	0～4	0～4	0～4
托板往复行程（mm） Reciprocating Speed Of Dragging Plate （mm）	450	450	450

砂轮主轴转速(rpm) Speed Of Main Spindle Of Grinding Wheel (rpm)	1450	2850	2850
主轴定心锥面跳动（mm） Runout Of Centering Conical Surface Of Main spindle（mm）	0.002	0.002	0.001
砂轮尺寸（mm） Dimensions Of Grinding Wheel（mm）	Φ400x40xΦ203	Φ400x40xΦ203	Φ400x40xΦ203
垂直快速升降(mm/min) Vertical Rapid Going Up And Down(mm/min)	200	200	200
垂直进给最小进给量（mm） Minimum Amount OF Feed Of Vertical Feed （mm）	0.001	0.001	0.001
加工平面度（mm） Processing Planeness（mm）	0.001/1000	0.001/1000	0.001/1000
工作台端面跳动（mm） End Face Runout Of Work Table （mm）	0.005	0.005	0.005
工作台电机功率(kw) Motor Power Of Work Table (kw)	4	4	4
砂轮主轴电机功率(kw) Motor Power Of Main Spindle Of Grinding Wheel (kw)	11	11	11
垂直升降伺服电机(n.m) Servo Motor For Verticai Going Up And Down(n.m)	15	15	15
工作台往复伺服电机(n.m) Servo Motor For Fen Reciprocation Of Work Table(n.m)	15	15	15
水泵电机功率 Motor Power Of Water Pump(w)	250	250	250
机床净重(kg) Net Weight (KG)	4500	4500	4500

半自动砂轮修整机 SXZP350



1）适用范围

80-350mm 直径的砂轮加工，单个固定在磨床上

80-150mm 直径的砂轮加工，组合式固定在磨床上

2）设备精度

①主轴径向跳动：≤0.03mm。

②主轴轴向跳动：≤0.03mm。

3）加工参数

摆动行程：80mm；

4) 设备功能

通过 CG 砂轮对金刚石砂轮/CBN 砂轮，俗称超硬砂轮，将金刚石砂轮/CBN 砂轮进行修正设定形状尺寸。

5）主要性能及优势

1、采用标准高精度燕尾华泰与交叉滚子滑台，实现结构高精度，高刚性；

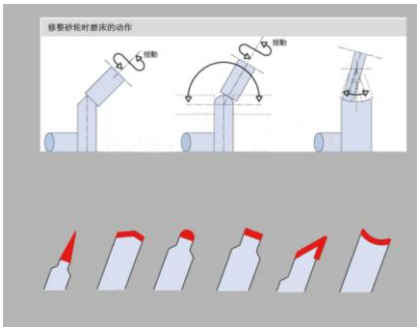
2、设备结构经历几代机型的不断升级优化，设备运行稳定可靠；

3、设备采用高精度 ccd 视觉系统，130 万像素工业相机与高品质远心镜头，170 倍放大倍率，实现精准的加工定位；

4、适合高亮 led 平行光源，实现加工角度可视化追踪

5、旋转轴内置编码器，旋转精度高，主轴表面心带有光源装置，使拍摄清晰，刚性强，使用寿命长

6、采用高强度底座，高精度稳定，耐磨性能和减震性能好。



6）器件品牌/材质要求

① 伺服电机：台达或其他品质相当的品牌。

② 主电机：东元或其他品质相当的品牌。

③ 变频器及其制动单元：台达或其他品质相当的品牌。

④ 气动元件：SMC 或其他品质相当的品牌。

⑤ 轴承：NSK、轴研或其他品质相当的品牌。

⑥ 低压电气元件：施耐德、西门子等品牌，或其他品质相当的品牌。

7）安全要求

① 机械裸露转动部位如磨轮、皮带、皮带轮、齿轮、链条、连轴器等，须按国家规定进行防护。

② 设备用电须符合安全规定，严禁任何区域有裸体导线，所有电线都必须进管进槽（固定电线进槽，可移动电线进管），设备须正确接地。

③ 设备上需安装照明，照明器件必须使用安全电压，首选 24V，次选 36V。

④ 设备须配备在安全状态下停机的总开关。

⑤ 电气控制箱采用封闭型结构。

⑥ 操作工位配有急停按钮，可以在操作工位关停，急停按钮启动后所有可动部件必须全部停止运行。

8）技术资料

乙方向甲方提供的技术资料包括但不限于：

① 电气原理图、机械结构图、易损零件图。

② 易损件明细表（规格、型号）。

③ 使用说明书（含设备维护、保养方法）。

④ 设备合格证明书。

⑤ 设备装箱单。

⑥ 主要部件的使用说明书或使用手册，包括但不限于：交流伺服电动机、伺服电机控制系统、变频器、PLC。

9）设备的验收要求

① 按上述技术参数及性能要求验收。

② 设备运行参数在要求的范围内。

③ 设备在运行过程中无异常振动和异响。

④ 设备空载运行时的噪音不大于 85db。

Diamond or CBN Grinding Wheel Dressing Machine

Semi-Automatic, SXZP350

FIG 1 Reference Picture 1

Semi-Enclosure will be similar to the picture above, subject to change.

1. Dressed Wheels

Single mounted grinding wheels in diameter from 80-350 mm

Package-mounted grinding wheels in diameter from 80-150 mm

No.	WHEEL TYPE	WHEEL DIA.	WHEEL THICKNESS	WHEEL BORE	WEIGHT
1	1A1	75-350mm	4-40mm	20-127	Max 10-11kg (for f350mm)
2	11V9	75-150mm	30-40mm	20-32 and bigger	
3	12v9	75-150mm	20-30mm	20-32 and bigger	

4	14f1	75-250mm	T<10 U=1-6mm R0,5-3	20-32 and bigger	
5	6A2	75-250mm	20-50	20-32 and bigger	
6	1V1, 12A2, 4A2, 11A2, 4BT9 And more				

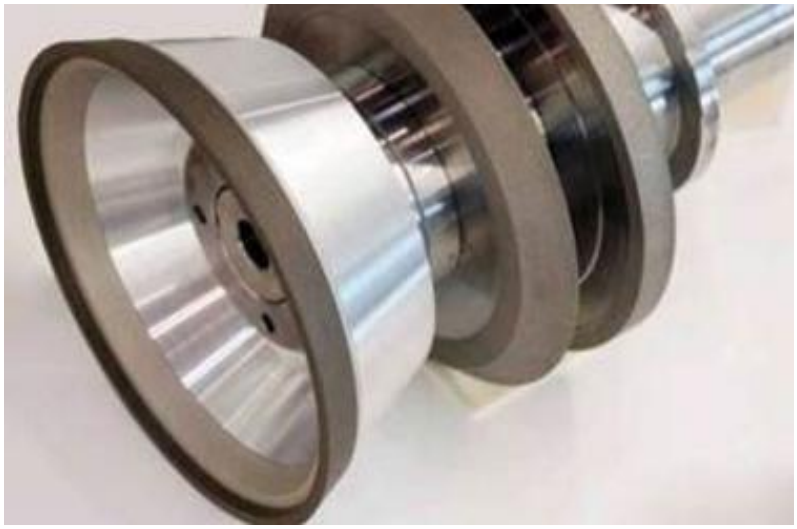


FIG. 2 Wheels in Package

2. System Tolerances

Spindle Radial Runout: ≤0.03mm

Spindle Axial Runout: ≤0.03mm

Processing Allowance: ≤0.5mm

Processing Accuracy: R = 0.1mm (In case of 14F1)

3. Technical Data

Travel of Oscillation Movements of Dressing Spindle: 80mm

Standard Technical Data (Subject to Changes for non-Standard Models)

Items	Sub-Items	Parameters	Note(s)
Diamond / CBN Grinding Wheel (Dressed Wheel)	Diameter Max.	350mm	
	Diameter Min.	75mm	
	Thickness Max.	50mm	
	Angle	±95°	
	Max. Weight	11	
	Min. Dial Scale	0.1°	
Spindle of Diamond / CBN Grinding Wheel (Dressed Wheel)	Connector / Flange	TB 30/ BT40 / HSK	Customer Option
	Diameter	D80 / D100	Customer Option
	RPM (Adjustable) A Axis (Spindle Rotation)	200-1800	Torque ≥9.0Nm Subject to Change
	Motor Power	0.75 KW	Subject to Change
Table of Grinding Wheel Spindle (Dressed Wheel)	Travel on Y Axis (From front to back)	±65mm	Cross Ball Slide Table / Grating Scale Manual Travel Subject to Change
	Travel on X Axis (From left to right)	±65mm	Cross Ball Slide Table / Grating Scale Manual Travel Subject to Change
Spindle Dressing Wheel	GC Wheel Spec.	200*10*31.75mm	
	RPM (Adjustable) B1 Axis (Spindle Rotation)	1000-3000	Torque ≥4.5Nm Subject to Change
	Motor Power	1.1 KW	Subject to Change
Table of Dressing Wheel Spindle	Feed (Adjustable)	Min. 0.005mm	
	Travel on Y1 Axis (Backward and forward)	±30mm	Manual Travel
	Travel on X1 Axis	0-80mm	Auto Travel
	GC Wheel Oscillation Travel	0-50mm	

	(Adjustable)		
	Oscillation Frequency (Adjustable)	0-35 Revolution / Min	
	Motor for Oscillation Movements	25W	
	C1 Axis (Angular Rotation of Spindle Table)	-95°~ -95°	Manual
CCD Visual Unit	Display	22 Inches	
	CCD Camera	1.3 Mega-Pixel	
	Tele-Parallel Bottom Light	46*70*40	
	Telecentric Lens Magnification Factors	High Accuracy Lens	

FIG. 3 Dressed Wheels and Dressing Wheel

4. Machine Scope

4.1 A GC wheel rotates against and dresses the diamond / CBN grinding wheels in desired shape and size.

4.2 Automation:

4.2.1 Auto: Arc and Radius Shaping as per the wheel profile detected by the CCD

4.2.2 Manual: Hand wheel Feed and Dress as per the wheel profile in CCD

Semi-Automation: (In Current Machine Scope)

- ✓ X Axis Manual
- ✓ Y Axis Manual
- ✓ A Axis Auto (Dressed Wheel Spindle Rotation)
- ✓ Y1 Axis Manual
- ✓ C1 Axis Manual (Angular Rotation for Fillets)
- ✓ X1 Axis VFD Speed Regulation and NC Controlled (Oscillations)
- ✓ B1 Axis Auto (Dressing Wheel Spindle Rotation)

Full-Automation: (Out of Current Machine Scope)

- ✓ X Axis Auto (VFD + PLC + Touch Screen)
- ✓ Y Axis Auto (VFD + PLC + Touch Screen)
- ✓ Y1 Axis Auto (VFD + PLC + Touch Screen, Dressing Feed)
- ✓ C1 Axis Auto (CCD System + Angular Rotation for Fillets)
- ✓ X1 Axis Auto (VFD + Oscillations)
    - ■ If the process of fillets or radius needs automation, full-automation machine shall be preferred.

4.3 Enclosure:

Refer to the Reference Picture 1.

The semi-enclosure doesn't have a front door in order for easy access to the spindles and wheels.

4.4 Flanges are excluded in the current machine specification. If needed, customers shall inform the flange specifications. Flanges are fixed by conical surface.

4.5 PLC Control

4.6 Marble Work Table

5. Key Properties and Advantages

5.1 V-Shaped Slide Table and Cross Ball Slide Table for High System Accuracy and High System Rigidness

5.2 Consistent Improvement and Stable Operation

5.3 CCD Visual System and 1.3 Mega-Pixel Camera and High Quality Telecentric Lens with 170 magnification factor for Precise Positioning

5.4 LED Parallel Light for Visualization and Track of Processed Angle

5.5 Built-in Spindle Encoder with Centered Light for High Rotation Precision, Clear Imaging, Good Rigidity and Long Service Life

5.6 High Strength Marble Machine Base, Wear Resistant and Shock Absorbent

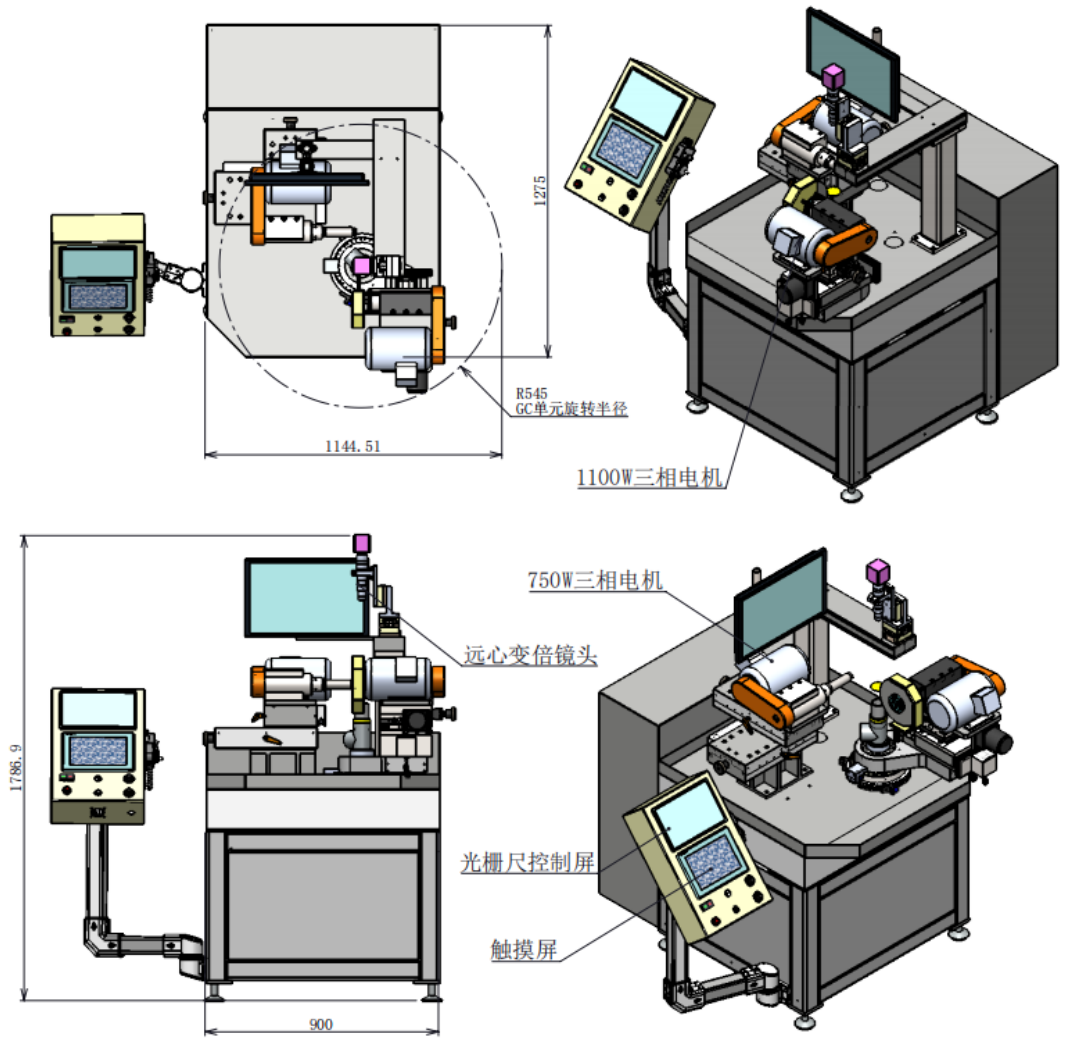


FIG. 4 Reference Picture 2

Subject to Change

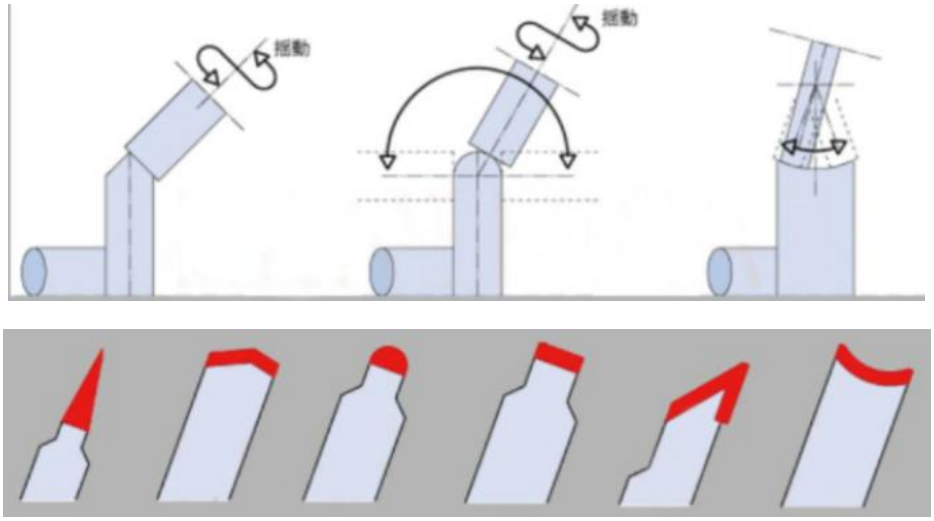


FIG. 5 Reference Picture 3
Subject to Change

6. Key Parts Brands

Servo Motors:	Delta or Equivalent
Spindle Motors:	Dongyuan or Equivalent
VFDs and Brakes:	Delta or Equivalent
Pneumatic Components:	SMC or Equivalent
Bearings:	NSK, ZYS or Equivalent
LV Electrical Components:	Schneider, Siemens or Equivalent

7. Safety

1. Movable parts such as grinding wheels, belts, pulleys, gears, chains, couplings shall be covered as per the national regulations.
2. Cables shall not expose their conductors. All of them shall go inside cable trays (for fixed cables) or tubes (for movable ones). The machine shall be properly earthed.
3. 24 V / 36V Lamp for illumination
4. Master switch for stopping the machine in safe condition
5. Electrical cabinet, panel and box shall be enclosed.
6. Emergency push button at the operation station stops the movable parts or units on the machine.

8. Documents

1. Electrical Drawing, Mechanical Drawing and Wear Parts Drawings
2. Wear Parts List (Type and Model)
3. User Manual (Maintenance and Repair Included)
4. Ex Factory Certificate
5. Packing List
6. Specifications or user manuals of key parts or components, for example, servomotors, and servo controls, VFD and PLC

9. Acceptance

1. Technical data and properties described above will be the criteria of acceptance
2. Machine runs as per the scopes of parameters
3. No abnormal vibration or noise shall be observed during the machine trial runs.
4. Noise level is no greater than 85dB when the machine runs in idle.

外圆磨床 JJ41-500X250-SY

1. 这台机器的主要应用程序
   JJ41-500X250 型磨机是利用磨轮加工一套与公称尺寸相同的平磨轮的磨机.
2. 机器的外部绘图及基本参数
   机器的外部绘图（绘图 1）

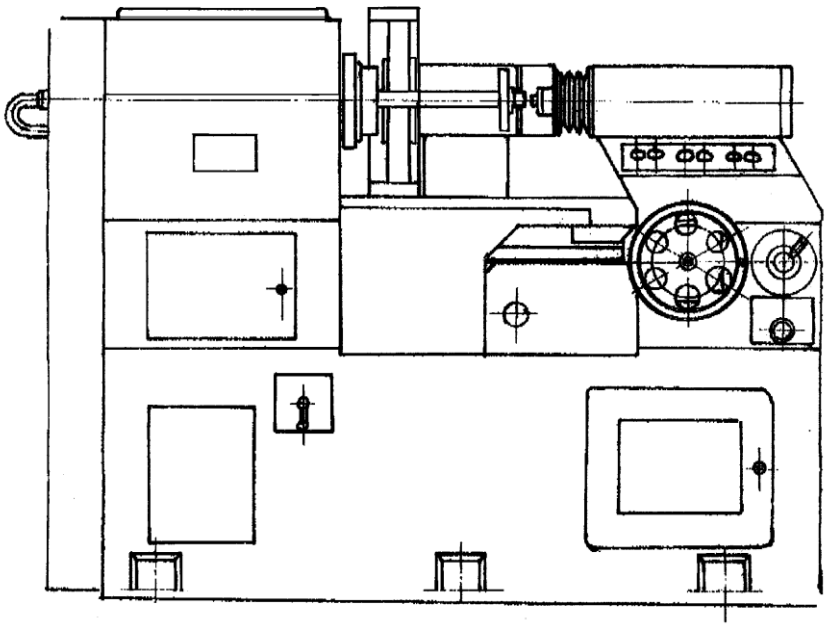


图 1

机器的基本参数

待处理的磨轮尺寸：

外径	150-500mm
厚度	250mm
主轴转速：	无极调速（变频）

用于处理圆周面的砂轮的尺寸：

原始：350x50x127mm

使用到：200x50x127mm

磨头转速	1500rpm
上刀架行程	280mm
上刀架移动速度	0.15~3.0m/min
下刀架行程	220mm
尾架气缸行程	150mm
尾气缸推力	（P=0.5MPa）3800N
主电机	YD132M1-6 4.0KW
磨头电机	Y100L1-4 2.2KW
油泵电机	Y802-4 0.75KW
外形尺寸（长 x 宽 x 高）	1800x11400x1250mm
净重	2.2t

3. 机器的主要结构和特点

本机共 8 件，根据对机器各部分的不同要求，我们采用了机械、液压和气动驱动。

3.1 床身

该床是整机的主要支撑部件。这张床就像一个用铸件做的橱柜，它用 5%的方螺栓固定在地面底座上。有一个内部空间（前提升块），用于将附件和工具放置在机器的前部分。在它的顶部，有一个固定的主轴盒。在床体的左腔内有一个双速电机。机器的油箱被放在床床的后部，大多数液压元件都固定在油箱周围。油箱上部固定在下部切割机架上。机器车身右腔内安装电动元件和气动元件。其下腔（后升块）固定的气动旋转盘阀、液压调速阀和控制下刀具架左右移动的手轮。手轮，通过链条切割杆，使同端螺杆运行，导致下刀具架左右移动。

3.2 主轴箱

主轴箱分为上、底箱。底壳固定在床体的前凸起块上。在顶壳和底壳的中间有一个洞。主轴及其脚步声要固定在孔上。用滚动轴承支撑，固定在螺旋脚上，使用超轴作为润滑剂。用三条皮带连接主轴和双速电机。

在主轴的中间，有一个单动作气缸，使用夹紧工作，也可以驱动芯杆轴向运动。在主轴的末端有一个旋转接头，其密封材料为聚四氟乙烯。

3.3 下刀架

低切割机框架的功能是使轮头横向移动。低切割机框架应固定在机身上。钢导轨固定在车厢鞍座和滑动导轨上。并配有防尘板来保护导轨。下刀架的运动在床体末端的手轮进行。

3.4 上刀架

上刀架的功能是使轮头纵向移动。上刀具架固定在下刀具架滑动导向器的 T 形沟中。滑动导向的运动由油缸驱动。下刀架的旋转导轨与导轨结构相同。运动速度由液压调速器阀控制。

3.5 陶轮的顶部表面

轮头用 6 个螺栓固定在上部工具架上。轮头轴带有 4 套 46212 轴承，密封。固定在轮头框架上的砂轮的车轮保护箱。

轮头电机固定在轮头框架的 T 型沟槽上。用三角形胶带使乔木可以旋转。

3.6 附件

机器有 8 套附件。通过这台机器，我们提供了四组配件（¢32、¢75、¢127、¢203）。另外 4 套配件（¢50、¢65、¢140、¢160），用户需要特别订购。为保证砂轮的轴向性要求，轴套对心销的所有尺寸均根据倒孔主轴的尺寸需要客户确认，下单时必须注明。

3.7 尾架

尾板用于夹紧工件和承载主轴。尾板用四个螺栓固定在车身后提升块上。尾板缸使尾箱芯移动以完成夹紧工件。尾板芯的前端采用中型旋转中心来承载主轴。有一个配音黑色的锥形孔的尾板芯。用于卸载堆芯夹具。当更新机芯夹子时。配音必须回到主场位置。

你可以看到一列按下的按钮被固定在尾锁上。

3.8 吸尘和收集磨料

因为不同的工厂有不同的吸尘方法。因此，用户需要自行设置粉尘吸收罩。

为了保持机器的清洁，便于收集废砂。这台机器有一个回收砂勺，这样用户就可以用砂袋来收集沙子。

Cylindrical Grinding Machine JJ41-500X250-SY

4. The Machine Application

The grinding machine, type JJ41-500 X 250, processes peripheral surfaces of several flat grinding wheels of the same nominal size. The flat grinding wheels are clamped by spindle extensions of different diameters, with flanges on both ends. One end of the spindle extensions is screw-connected to the head stock spindle with a conic positioning shaft that couples with the spindle extensions. And the other end of the spindle extensions is clamped by the center Mohs #4 of the tail stock.

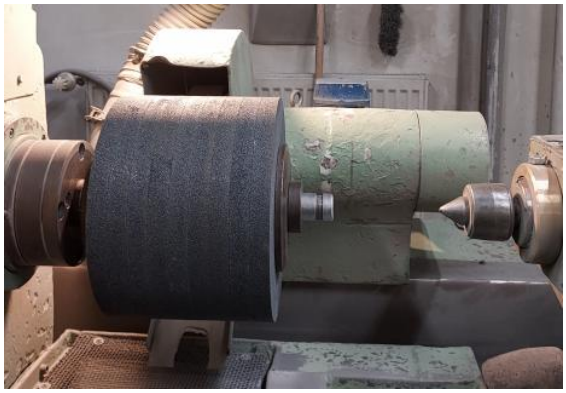


Fig. 1

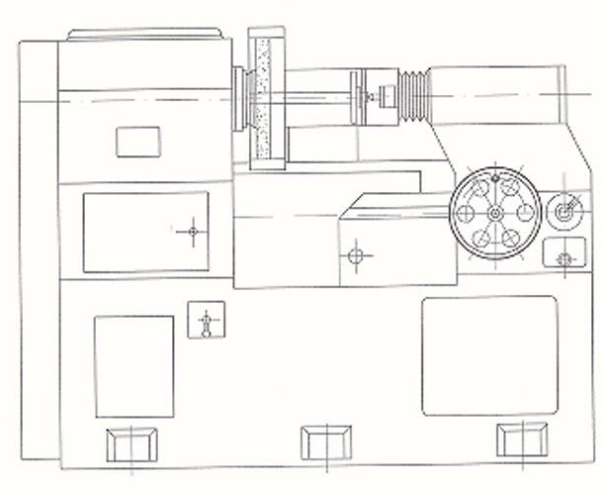


Fig. 2

Features:

1.1 Standalone Electrical Cabinet

1.2 Hydraulic Reciprocating Movement of Grinding Wheel Head

1.3 Work Spindle Stepless RPM controlled by VFD

1.4 Manual Infeed

1.5 Real-Time Diameter Display by Grating Scale

5. The machine's outside drawing and basic parameter

Technical Parameters

The machine's basic parameter

The size of grinding wheel being treated	outside diameter	150-500mm
	Thickness	250mm
Rotation speed of spindle	Stepless RPM, VFD controlled	
The size of grinding wheel used for treatment of the circumferential faces:		
	Up to 350x50x127mm	
	Use up to 200x50x127mm	
Rotating speed of wheelhead	1500rpm	
Haul cycle of upper cutter frame	280mm	

Moving speed of upper cutter frame	0.15-3.0m/min	
	By Adjusting the Speed Valve	
Haul cycle of lower cutter frame	220mm	
Haul cycle of tailstock cylinder	150mm	
Thrust force of tailstock cylinder	(P=0.5MPa) 3800N	
Power and type of main motor	Y132M1-6	4.0KW
Power and type of moter for wheelhead	Y100L1-4	2.2KW
Power and type of motor for oil pump	Y802-4	0.75KW
Profile size (length x width x height)	1800x1140x1250mm	
Net weight	2.2T	

6. The machine's main structure and characters

This machine is made with 11 parts, such as machine bed, spindle box, upper cutter frame, lower cutter frame, grinding unit, tail stock, sand waste hopper, accessories of spindle extensions, electrical parts, hydraumatic and pneumatic drives.

6.1 Machine Bed

The bed is the main supporting components of whole machine. This bed likes a cabinet made with cast and it be fixed the ground base by 5 pc fang bolts. There is an internal space(fore raising block) for putting the accessory and tools in fore part of the machine. In its top, has a main spindle box fixed on it. In the left-cavity of bed-body has a two-speed motor. The machine's oil box be putted in the back of bed-bady , The most hydraulic element are fixed around the oil box. The upper of oil box be fixed of lower cutter frame. The right cavity of machine body installs electric elements and pneumatic element. Its lower cavity(back raising block) fixed pneumatic rotary disk valve, hydraumatic speed-control valve and handwheel which control the lower cutter frame to move right-and-left. The handwheel, through chain cutter bar, makes the coterminous screw rod running result in the lower cutter frame moving right-and-left.

6.2 The main spindle box

The main spindle box be divided into top case and bottom case. The bottom case fixed on the fore raising block of bed-body. There is a hole in the middle of top case and bottom case. The main spindle and its footstep be fixed on the hole. The spindle supporter by roll-bearing which be fixed in the hermeic footstep and using supramoly as lubricant. Using three rubber belts to join spindle and two-speed motor.

On the middle of spindle,there is a single-action cylinder,using for clamping work, also could drive the core bar axial moving. There is a rotating joint at the end of spindle,its sealed material is PTFE.

6.3 The lower cutter frame

The function of low cutter frame is make wheelhead move cross-direction. The low cutter framer be fixed on machine body. The steel guide-rail fixed on carriage saddle and sliding guide. And having dust guard plat to protect guide-rail. The movement of lower cutter frame is carried out by hand wheel at the end of bed-body.

6.4 The upper cutter frame

The function of upper cutter frame is make wheelhead move lengthwise movement. The

upper cutter frame be fixed in the T-shape ditch of a sliding guide of the lower cutter frame. The movement of sliding guide is driven by oil cylinder. The rotation guide-rail and the guide-rail of lower cutter frame has the same structure.The moving speed is controlled by hydraumatic governor valve.

6.5 wheelhead

The wheelhead fixed with 6pcs screw bolts on upper tool frame. The arbor of wheelhead is carried with four sets of 46212 bearing and it is sealed. The protecting case of the wheelhed for grinding wheel fixed on wheelhead frame.

The motor of wheelhead fixed on T-shape ditch of wheelhead frame.Using triangle adhesive tape to make arbor to rotate.

6.6 Accessories of Spindle Extensions

The machine have 8 sets of accessories of spindle extensions(see drawing 2-9).With the machine, we supply four sets of accessories(¢32, ¢75, ¢127, ¢203).Another four sets of accessories (¢50, ¢65, ¢140, ¢160),The user need to order specially. In order to guarantee the axiality requirement of grinding wheel,all sizes of spindle bushing's centering pin need customer confirmation according to the sizes of pour-hole's spindle, and it must be indicated when places the order.

6.7 The tailstock

The tailstock is used for clamping work-piece and carrying spindle.The tailstock is fixed to the back raising block of machine body with four screw bolts. The cylinder of tailstock makes tailstock-core move to fulfil clamping work-piece. The frontend of tailstock-core use medium-sized rotating center to carry spindle. There is a dub-black in tapered bore of tailstock-core. It is used for unloading core clamper. When renewing the core clamper. The dub-black must be put back the home position at first.

You could see a train of depressed button which be fixed on the taislock.

6.8 dust absorption and collecting abrasives

Because different factories have different dust absorption method. So, the user need to set the dust absorption cover by themselves. In general, it could be set by seeing drawing 10, If requiring more strong ability of dust absorption, you also could set it according to drawing 11.

In order to keep the machine cleaning and easy to collect waste sand. This machine has a reclaiming sand scoop so that the user could use bag to collect the sand.