

主轴控制面板  
Spindle control panel



真空检测开关  
Vaccum tester



夹具体  
Air-floated fixture



Work head Pedal  
头架气浮脚踏



气路控制阀  
Air adjustmant control



气路控制面板  
Air control panel



铸件床身,更高的机械性  
T-slot upper beam



气浮工作台,使工件移动更加自如  
air-floated table can make the movement  
of work-piece more flexible

## VALVE SEAT BORING MACHINE MODEL:TL120

The TL120 Power offers the patented new Triple Air-Float Automatic Centering system and its high torque and powerful motor spindle. Very accurate, all-purpose machine to cut valve seats and ream valve guides. Extremely versatile this machine will cut valve seats from the smallest to the biggest diameter. Thanks to its lightweight floating system. It will machine cylinder heads of any size from micro-engines up to big stationary engines.

### 高精度气门座镗床 型号: TL120

高精度多用途气门座镗床TL120全方位满足对气门导管和气门座的镗铰和切削加工，并配有三重气浮装置、自动对中系统及高扭矩电机主轴。高实用性气门座镗床，可精确加工从最大到最小直径尺寸的各种气门座，可轻松修复现有从微型到大型的任何规格发动机。轻巧的气浮装置使该设备可以加工气门导管直径小至4mm (0.157" 的气缸盖)

### Features

- Featuring a machine bed structure optimized by static and dynamic calculation, with a modern , modular and functional design, it can accommodate either the tilting fixture (+42deg to -15deg) or the hydraulic 360deg roll-over fixture with lateral up-and-down system.
- TL120 power has a benefit of air floating table bars. Thus adding faster setup time and effortless shifting of any size cylinder head. This feature decreases operator fatigue and increases productivity.
- Machining capacity .0.63"/16mm to 4.27"/120mm.
- Fitted with the new tooling that decreases the cutting force by 30%, this machine will cut the hardest seats.
- Patented lightweight workhead: built-in spindle motor and triple air-float automatic entering system. Minimal workhead inertia and maximal floatation for unmatched centering sensitivity.
- Build-In spindle motor. Broad torque ratings from lowest RPM.
- Fully integrated spindle motor: Infinitely variable spindle speed, 0 to 1000r.p.m., with sensorless Vector Flux Control in open loop (extremely broad torque ratings from lowest r.p.m.). Digital spindle rotation read out.
- High quality smooth, 3 tone paint work.

### 产品简介

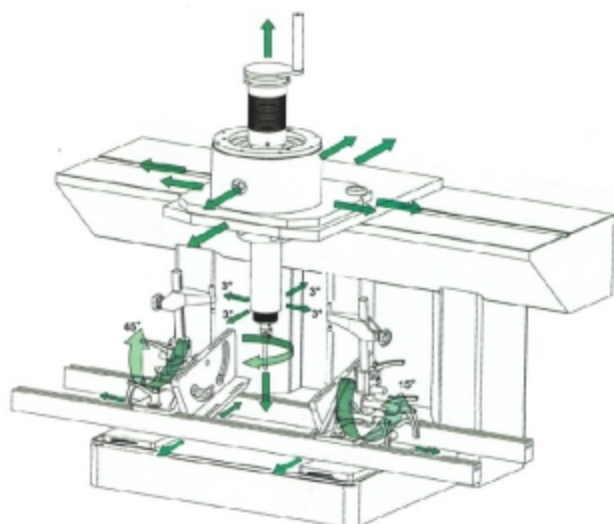
- 采用动静态结合算法优化机身结构。融现代化、标准化、功能化为一体的设计理念，侧向上下系统，最大限度的保证了夹具体在（+42° ~ -15°）方向上倾斜夹紧，以及360° 液压翻转夹紧。
- 采用气动夹紧装置实现镗头在机床上的机械锁定。
- 专利制造轻型镗头：主轴电机及三向气浮。使主轴在对中环节的灵敏度及准确度无与伦比。
- 球型气缸经真空系统预夹紧后由闭环回路的液压活塞进一步锁定。
- 一体化电机主轴，0-1000RPM无级变速，源于开环回路矢量变频控制。并具速度数显功能。
- 安装专用SCS道具，节省切削力达30%，可加工材质硬度最高的气门座。
- 加工能力：16mm/0.63"-120mm/4.27"。
- 汽缸盖气浮于工作台往复位移，并气动锁定。
- 高质量三色饱和漆。

## 规格参数

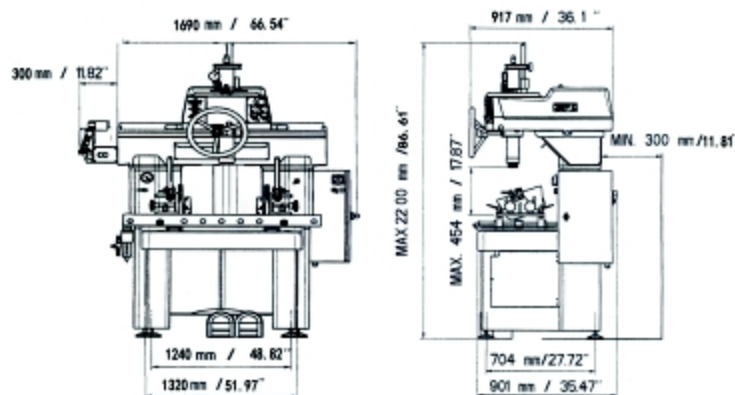
## SPECIFICATION

<b>加工能力</b>	<b>Machine capabilities</b>		
汽缸盖最长尺寸	Max. length of the cylinder head	mm / inch	无限制/Unlimited
汽缸盖最宽尺寸	Max. width of the cylinder head	mm / inch	500 / 19.7
汽缸盖最高尺寸	Max. height of the cylinder head	mm / inch	450 / 17.7
横向工件倾斜角度	Crosswise work piece tilting	degrees	+45°~ -15°
工作台横向移动	Maximum table horizontal travel(mm)	mm / inch	160/4.3
<b>加工范围 (最小到最大)</b>	<b>Machining capacity dia. (min-max)</b>	Φmm / inch	16/120/0.6-4.7
<b>自对中镗头行程</b>	<b>Work head displacement</b>		
纵向	Lengthwise	mm / inch	990/39
横向	Crosswise	mm / inch	40/1.6
球形汽缸行程	Sphere-Cylinder travel	mm / inch	9 / 0.4
<b>主轴</b>	<b>Spindle</b>		
主轴最大倾斜角度	Max.spindle incination	degrees	5
主轴行程	Spindle Travel	mm / inch	200 / 8
主轴电机功率	Power of the spindle	kw	2.2
主轴转速	Spindle rotation speed	rpm	0-1000
<b>外设</b>	<b>Alimentations</b>		
电源	Electric supply	380v/50Hz 3Ph or 220v/60Hz/3Ph	
气压	Air pressure	bar / psi	6 / 87
最大气流	Max. air flow	l/mn -CFM	300 / 11
噪音等级400RPM下	Level of noise at 400 RPM	dba	72
1200RPM下	Level of noise at 1200 RPM	dba	82
净重 (约)	Net weight (approx.)	kg / lbs	1500/3300
<b>床身尺寸</b>	<b>Machine space requirements</b>		
长	Length	mm / inch	1750/68.9
宽	Width	mm / inch	1150/45.3
高	Height	mm / inch	2200/86.6

三重气浮系统/ Triple air-cushion system



外形尺寸 / Required Space





标准附件/STANDARD ACCESSORIES

<p>①</p>  <p>刀柄5700/5710 5700/5710 Tool holder</p>	<p>②</p>  <p>刀座2700/2710/2711 2700/2710/2711 Bit holder</p>	<p>③</p>  <p>芯轴 <math>\phi 5.98 \sim \phi 11.98</math> <math>\phi 5.98 \sim \phi 11.98</math> Carbide pilot</p>	<p>④</p>  <p>刀片 Carbide bit</p>
<p>⑤</p>  <p>对刀器4200 Tool setting device 4200</p>	<p>⑥</p>  <p>水准仪 TL120 leveling device</p>	<p>⑦</p>  <p>专用扳手 Allen wrench</p>	<p>⑧</p>  <p>真空检测 Vacuum Pad</p>
<p>⑨</p>  <p>磨刀机 Sharpener</p>	<p>⑩</p>  <p>安装手册 TL120 manual book</p>	<p>⑪</p>  <p>万能夹具体 Universal Clamping system</p>	

可选附件/OPTIONAL ACCESSORIES

<p>①</p>  <p>刀柄T5731 Tool holder T5731</p>	<p>②</p>  <p>刀座T2730 Bit holder T2730</p>	<p>③</p>  <p>Rn绞刀 Reamer Rn type</p>	<p>④</p>  <p>锁紧刀柄T3100 TD-ER20CN ER-32 chuck holder (together use with precision chuck T3100)</p>
<p>⑤</p>  <p>弹簧夹头TD-ER20SC TD-ER20SC spring chuck</p>	<p>⑥</p>  <p>过渡套T3200 T3200 Adaptor for morse</p>	<p>⑦</p>  <p>扳手TD-ER20SW TD-ER20SW spanner wrench</p>	<p>⑧</p>  <p>座圈精度表 valve seat run-out gauge</p>
<p>⑨</p>  <p>平缸盖夹具体 Flat cylinder head fixture</p>	<p>⑩</p>  <p>长夹棒 Long clamping bar</p>	<p>⑪</p>  <p>平行块 U Block</p>	

备注：具体数量参照随机装箱单。

Please refer to the packing list for detailed QTY of acc's supplied with machine.