

All We Do Are Clients Demand



Pre-sales technical information

YSV-1060

Vertical Machining Center

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1. Machine features



YSV-1060 features:

1. Spindle motor β ii8/12000 high torque motor. The outer diameter is up to 150mm and the high rigidity Taiwan BBT40 short nose spindle has a unique labyrinth device and labyrinth blowing device at the nose of the spindle to effectively protect the spindle. The maximum speed of the spindle can reach 8000rpm, which has the characteristics of high rigidity and high precision.

2. The machine tool parts belong to the famous brand of famous factory, and the top configuration in the industry.



日本SHOWA注油器



SMC/亚德客气源处理装置



欧易热交换器



双水泵系统55米扬程



施耐德电气元器件



日本产LED照明灯



高亮LED带蜂鸣警示灯

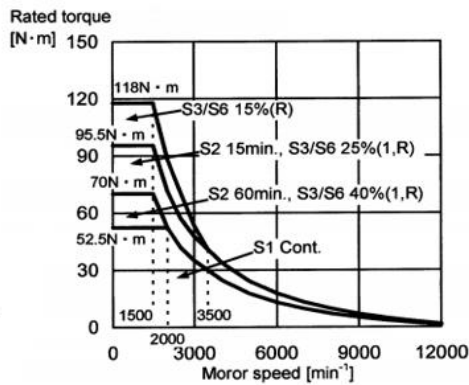
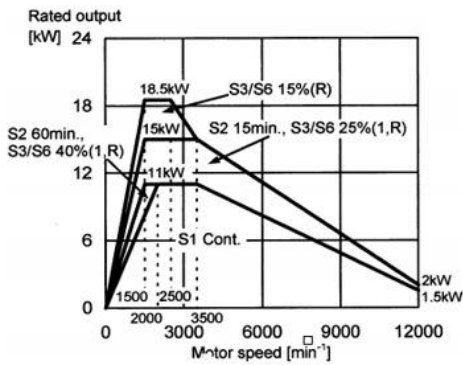


变频刀库

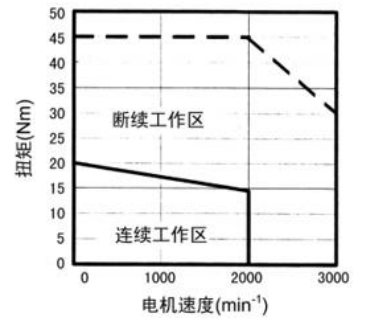
3. Triaxial torque and spindle torque graph

| 系统 | 0i-MF Plus (5) | 额定功率kW | 额定扭矩N.m | 最大扭矩N.m |
|------|-----------------------|--------|---------|---------|
| X轴 | β is 22/3000-B | 3 | 20 | 45 |
| Y轴 | β is 22/3000-B | 3 | 20 | 45 |
| Z轴 | β is 22/3000-B | 3 | 20 | 45 |
| 主轴SP | β il 12/12000-B | 11 | 52.5 | 118 |

β il 12/12000-B



β iS 22/3000-B





2. Optomechanics

三轴行程: X/Y/Z :1000/600/680
三轴线轨: 日本THK/德国力士乐
三轴丝杠: 日本THK (直径40),

三轴预留光栅尺安装位置
床身采用精密HT300高牌号铸铁



YSV-1060 optical machine features:

1. Adopt Japanese THK/Rexroth line rail, and the width of Y/Z line rail is up to 45mm;
2. The ultra-wide base is as stable as Mount Tai;
3. The double-layer arm structure of the force column increases the rigidity by 1.5 times;
4. The X-axis sliding seat has a super-large span, and the "herringbone"-shaped column design is as stable as Mount Tai;
5. The three-axis adopts THK 40mm outer diameter C3 grade screw, and the three-axis adopts NSK original bearing (3062), 3+2 mode, pre-tensioning treatment to prevent thermal displacement;
6. High rigidity BBT40 short nose spindle with outer diameter of 150mm, ring spray design;

两面定位系统
BIG-PLUS 两面定位主轴系统 
BIG PLUS SPINDLE SYSTEM



- 通过确立完善的量规系统, 实现了锥面、端面同时两面定位的系统。
- 采用BIG-PLUS系统的公司: 日本66家 其它国家90家

获得第23届发明大奖/
池本发明功劳奖

两面定位

BIG-PLUS的种种优点:

- 提高加工表面和加工尺寸精度
- 延长刀具寿命
- 抑制重切削时因振动引起的锥柄变色 (微动磨损)
- 提高ATC的重复精度
- 高速旋转时Z方向尺寸稳定
- 提高镗孔加工的圆度

7. Using Taiwan original ultra-high-speed knife cylinder, the knife time can reach 0.28S;
8. The machine bed is made of precision HT300 high grade cast iron.



3. Technical parameters

| Project | Specification | Unit | YSV-1060 |
|---------------|--|--------|---|
| Travel | X/Y/Z axis | mm | 1000/600/680 |
| | Distance from spindle nose to worktable | mm | 120-800 |
| | Distance from spindle center to column track | mm | 610 |
| | Track form | | linear guide |
| Working table | Table size (L*W) | mm | 1100*600 |
| | The max load capacity of the workbench | kg | 1000 |
| | T-slot | No/mm | 5-18×90 |
| Spindle | Spindle Taper Hole (Model/Installation Dimensions) | mm | BBT40 |
| | Spindle speed | rpm | 10000 |
| | Max speed | rpm | 8000 |
| | Spindle drive mode | | Belt type |
| Feed | X/Y/Z axis rapid feed | m/min | 30/30/30 |
| | Cutting feed | mm/min | 10000 |
| Tool changer | Tool change method | | Side mounted frequency conversion |
| | Handle Specifications | type | BT40 |
| | Tool capacity | Tools | 24 |
| | Max Tool Diameter (Proximity Tool) | mm | 80 |
| | Max tool diameter (without adjacent tool) | mm | 120 |
| | Tool length | mm | 300 |
| | Tool weight | kg | 7 |
| Motor | Fastest tool change time | sec | 1.8 |
| | Spindle motor | kw | β iI 8/12000 |
| | Three-axis servo motor | kw | β iSC 12/3000/βiSC 12/3000/β iSB22/3000 |
| Precision | Cutting water pump motor | m/h-m | 4-60 |
| | Positioning accuracy | mm | ±0.005 |
| Power | Repeatability | mm | ±0.003 |
| | Power requirements | kva | 20 |



| | | | |
|-------------|-------------------------|-------|----------------|
| requirement | Air source requirements | Kg/cm | 6~8 |
| Other | L*W*H | mm | 2640*2354*2575 |
| | Weight | t | 7 |

4. List of main accessories

| No. | Name | Quantity | Manufacturer | Specification Model |
|-----|------------------------------|----------|------------------------|--|
| 1 | CNC system | 1 Set | Japan FANUC | OI-MF-plus |
| 2 | Spindle servo motor | 1 Set | Japan FANUC | β iI 8/12000 |
| 3 | X, Y, Z servo motors | Each 1 | Japan FANUC | β iSC12/3000/ β iSC12/3000/ β iSB22/3000 |
| 4 | Main shaft front bearing | 1 Set | Japan KOYO | 7014*3 |
| 5 | Spindle rear bearing | 1 Set | Japan KOYO | 7014*2 |
| 6 | X, Y, Z axis screw bearings | Each 1 | Japan NSK | 30TAC62 |
| 7 | X, Y, Z axis roller screw | Each 1 | Japan THK | \varnothing 40*P10*C3 |
| 8 | X-axis linear guide | 2 | THK/Rexroth | 35 |
| 9 | Y-axis linear guide | 2 | THK | 45 |
| 10 | Z-axis linear guide | 2 | THK | 45 |
| 11 | Spindle unit | 1 Set | YANGSEN | BBT40/ 150 |
| 12 | Tool magazine | 1 Set | Okada | 24 discs |
| 13 | Cutting fluid pump | 1 Set | YANGSEN | 40-30 |
| 14 | Automatic lubrication system | 1 Set | Japanese SHOWA | 2L |
| 15 | Booster cylinder assembly | 1 Set | Taiwan China and Japan | |
| 16 | Main pneumatic components | 1 Set | Japan SMC | |
| 17 | Main electrical components | 1 Set | Schneider | |
| 18 | Main drive toothed belt | 1 Set | American Gates | |
| 19 | X, Y, Z axis coupling | Each 1 | Japan NBK | |
| 20 | Heat exchanger | 1 | Ou Yi | |



| | | | | |
|----|------------|---|------|--|
| 21 | Oil cooler | 1 | Rico | |
|----|------------|---|------|--|

If the supplier can not supply, it will be replaced with the brand of the same quality.

5. Standard accessories

| No. | Name | No. | Name |
|-----|---|-----|---|
| 1 | 24 disc tool magazines | 12 | Warning light (with buzzer) |
| 2 | Fully enclosed hood | 13 | Floor blocks |
| 3 | Automatic lubrication system | 14 | Workpiece Cooling System |
| 4 | Toolbox | 15 | Network transmission and CF card function |
| 5 | Working lamp | 16 | Rigid tapping |
| 6 | Electrical box heat exchanger | 17 | Safety door |
| 7 | Spindle air curtain dustproof system | 18 | Portable chip blowing air gun |
| 8 | Large flow chip flushing device | 19 | Machine cleaning water gun |
| 9 | Spindle ring water outlet | | |
| 10 | Iron chipping disc and chip storage box | | |
| 11 | M30 automatic power off device | | |



6. Optional accessories

| No. | Name | No. | Name |
|-----|--|-----|---------------------------------------|
| 1 | Siemens, Mitsubishi CNC system, etc. | 9 | Oil Mist Recovery System |
| 2 | 24T Disc Tool Magazine | 10 | Automatic tool setting instrument |
| 3 | High pressure cooling device (with central water outlet spindle) | 11 | Automatic tool detection device |
| 4 | Spindle oil cooling device | 12 | 4th axis CNC turntable (Taiwan Risun) |
| 5 | Three-axis optical ruler | 13 | Disc oil-water separator |
| 6 | Chip conveyor and chip accumulator | 14 | 12000rpm direct-coupled spindle |
| 7 | Electrical cabinet thermostat control device (air conditioner) | 15 | 15000rpm direct-coupled spindle |
| 8 | Chip liquid water cooling device | 16 | Powder recovery system |

Note: If this configuration is selected, tick $\sqrt{\quad}$ in the box of the corresponding item