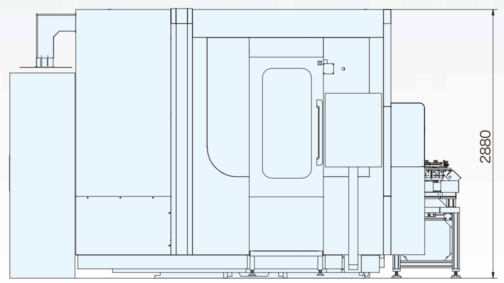
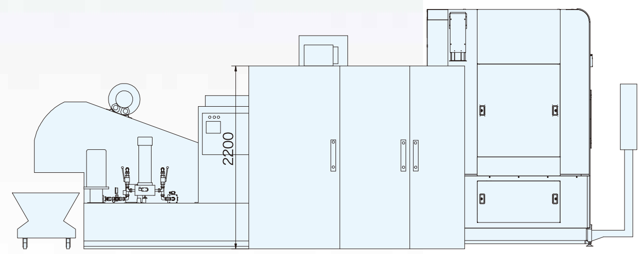
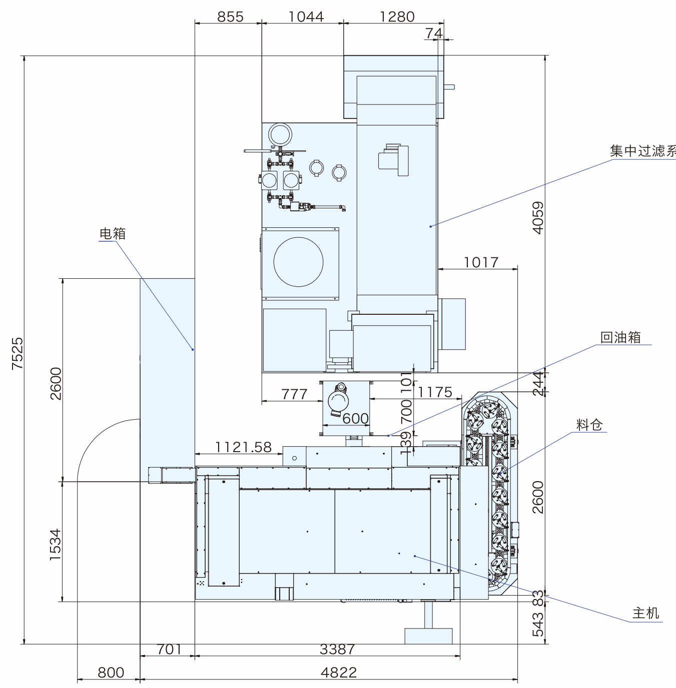
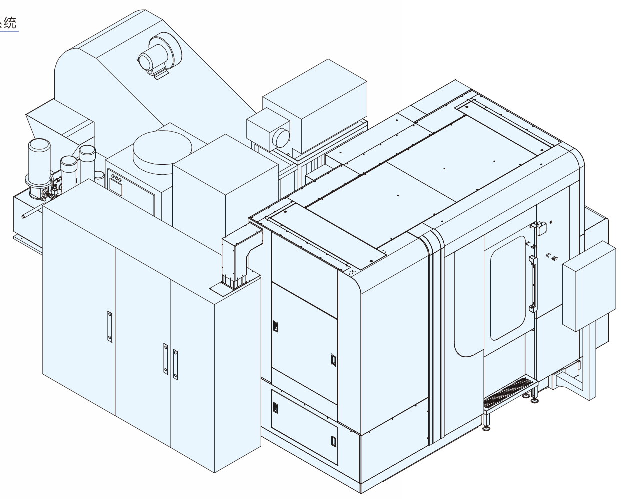
## 安装基础图 Foundation Plan




产品样本内，说明文字、图样及技术参数随技术发展而更改，不另行通知，外形、尺寸以实物为准。(20170402-FT17-0061)

With technical development, the explanation, diagram and specifications are subject to change without further notice. Actual machine dimensions should be taken as authentic.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# YS7232CNC
# CNC Universal Gear Grinding Machine
# YS7232CNC 数控万能磨齿机

# YS7232CNC 数控万能磨齿机

GUDWILL

# YS7232CNC
# CNC Universal Gear Grinding Machine

NGG
万能磨齿机

## 主要特点

- 机床为 11 轴数控、五轴联动数控万能磨齿机，数控轴为：A1 — 磨齿刀架回转运动、B1 — 砂轮主轴旋转运动、B2 — 修整轮旋转运动、C1 — 工作台旋转运动、C2- 修整轮摆角运动、X1 — 砂轮径向进给运动、Y1 — 砂轮切向进给运动、Z1 — 砂轮轴向进给运动、Z2 — 外支架轴向运动、U1 轴—喷嘴移动、C3 轴—料爪回转轴；
- 机床采用经典的结构布局形式及最先进的磨削技术，将极高的生产效率和精密的齿轮磨削完美地结合；
- 机床具有展成磨削和成形磨削功能；
  机床通过控制系统的多通道控制平台，柔性控制 11 个数控轴，实现工件自动装夹、自动砂轮修整、高速自动对刀、AE 自动磨削工艺监控、自动分配磨削余量、自动磨削等整个加工过程的全自动控制；
- 砂轮主轴采用大功率电主轴直接驱动技术，配备内置动平衡装置和砂轮防碰撞装置，有效保证磨削质量；
- 工件主轴采用内装主轴电机直接驱动技术，并实现闭环控制，大大提高工件主轴的驱动刚性和动态响应速度；
- 砂轮主轴、工件主轴均采用强制循环水冷系统，使整个主轴系统具有极好的热平衡特性；
- 机床各直线运动部件采用高刚性滚动直线导轨并加光栅尺形成闭环控制，各滚珠丝杆副采用进口的带预加负荷的高精密丝杆，并采用高精度、高刚性进口组合轴承支承，提高了传动精度、可靠性、稳定性；
- 多种磨削软件可供选择，实现人机对话、齿轮的计算、齿轮数据库的管理及维护、齿轮磨削及砂轮修整程序的自动生成、各种磨削方式选择、齿形齿向修形等；
- 机床可配置齿面扭曲补偿功能（三截面修形功能）、点修整功能（柔性修形功能）、低噪音磨削功能（网纹磨削功能）等各种软件功能。
- 机床配置自动上下料机构、工件自动存储料仓、自动门等，降低操作强度，节省辅助时间，提高生产效率。
- 加工精度可达 GB/T10095.1−2008 标准 3−4 级。

## Main features

- It is of 11 axes with 5 axes coordinated controlled universal gear grinding machine. Its CNC axes are: A1-axis-----grinding head swivel motion; B1-axis-----grinding spindle rotary motion; B2-axis-----dressing wheel rotary motion; C1-axis-----worktable rotary motion; C2-----dressing wheel swive motion; X1-axis-----grinding wheel radial feed motion; Y1-axis-----grinding wheel tangential feed motion; Z1-axis-----grinding wheel axial feed motion; Z2-axis-----tailstock axial feed motion; U1-axis----nozzle travel; C3-axis-----loader swive motion.
- This machine integrated with classical arrangement and most advanced grinding technology, resulting in super high efficiency and precision gear machining.
- Both generating grinding and profile grinding methods are available.
  The 11 axes of the machine are flexibly controlled by the CNC system, and several actions can be independently performing at the same time. So as to carry out full automatic control during the whole machining process, include work setup, grinding wheel dressing, high speed tool alignment, AE (acoustic emission) grinding process monitoring, stock dividing, grinding, and etc.
- A powerful spindle motor that carry out direct driving is used for grinding spindle; equipped with a built-in dynamic balance device and an anti-collision device for the grinding wheel to ensure grinding quality.
- The work spindle is adopted a built-in spindle motor that carry out direct driving, and connected with an angular encoder to form a closed loop control so that greatly enhance its driving rigidity and dynamic response speed.
- Forced circulating water cooling system is used for grinding spindle, work spindle, and dressing spindle to ensure the whole spindle system has perfect thermal balance performance.
- High rigidity roller linear guideways are used for each linear motion part and linear encoder is adopted to form a closed loop control; each ball lead screw is of imported pre-loaded super precision one; imported high precision and good rigidity combined bearings are used for supporting; resulting in high transmission accuracy, reliability and stability.
- Several kinds of grinding software are available to carry out various functions, such as man machine conversation, gear calculation, gear data base management & maintenance, programs automatic generating for gear grinding and grinding wheel dressing grinding mode selection, grinding area inspection, tooth profile and longitudinal modification, and etc.
- It is available to realize flank twist compensation function, flexible profile dressing function, and noise reduction grinding function as optional.
- Several devices, such as auto loading & unloading device, workpiece auto storage, auto door, and etc., are available to reduce operation strength, save auxiliary time and enhance production efficiency.
- Machining accuracy up to grade 3-4 of chinese standard GB/T10095.1-2008

## 标准配置

- 全密封护罩
- 油雾收集器
- 油冷机
- RJ45 USB
- 机床数据存储光盘
- 15" 显示
- 双手操作系统
- 安装工具
- 调整工具
- 自动上下料系统
- 自动料仓存储系统
- 机床减震垫铁
- 后立柱
- 液压系统
- 冷却系统
- 润滑系统
- 带空调的电气控制箱
- 门联锁装置
- 机床状态显示四色灯
- 集中过滤器
- 铁屑小车
- 水冷机

## Standard Attachments

- Fully-enclosed guards
- Oil mist collecter
- Oil chiller
- RJ45 USB
- Machine data storage disc
- 15" color display
- Dual-hand operation system
- Tools for installation
- Tools for adjustment
- Auto loading & unloading system
- Auto workpiece storage system
- Isolating vibration pads
- Workstay
- Hydraulic system
- Cooling system
- Lubrication system
- Electrical cabinet with air conditioner
- Interlock safety switch
- Four color tower light for indicating machine status
- Centralized filter
- Chip cart
- Water cooler

## 主要技术参数 Main specifications

| 项目 | Description | 单位 Unit | YS7232CNC |
|---|---|---|---|
| 最大加工直径 | Max. worrlpiece dia. | mm | 320 |
| 最大加工模数 | Max. module | mm | 6(展成磨)/10(成形磨) |
| 最大轴向行程 | Max. axial travel | mm | 600 |
| 砂轮最大安装直径 × 长度 | Max. grinding wheel dimension: dia.x length | mm | ∅ 300 × ∅ 115 × 160 |
| 工作台面直径 | Worktable surface diameter | mm | 250 |
| 刀具最大回转角 | Max. grinding wheel swivel angle | deg | ±45° |
| 砂轮中心至工作台中心水平距离 | Center distance between grinding wheel and worktable | mm | 30–530 |
| 砂轮中心距工作台台面垂直距离 | Distance between grinding wheel axis and worktable surface | mm | 150–700 |
| 小立柱顶端面距工作台面距离 | Distace between center end face and worktable surface | mm | 415–780 |
| 切向最大行程 | Max. grinding wheel tangential travel | mm | 260 |
| 砂轮主轴最高转速 | Max. grinding wheel spindle speed | r/min | 10000 |
| 工作台最高转速 | Max. worktable speed | r/min | 1500 |
| 径向快速移动速度 | Radial rapid travel | mm/min | 10000 |
| 切向快速移动速度 | Tangential rapid travel | mm/min | 10000 |
| 轴向快速移动速度 | Axial rapid travel | mm/min | 10000 |
| 电主轴功率 | Main motor power | kW | 40 |
| 机床电力总负荷 | Total power | kW | 75 |
| 主机重量 | Main machine weight | kg | 14500 |
| 机床包装箱 | No. of cases | | 三箱 3 cases in total |

备注：带 * 的技术规格需特殊订货。
Remarks: Technial specifications with symbol "*" are for special order.

注：以上参数如有更改，恕不另行通知。Note:specifications above are subject to change without notice.

## 可选配置

- 自动门
- 冷却过滤系统：德国 Hoffmam
- 扭曲补偿功能
- 点修整功能
- 网纹磨削功能

## Optional Attachments

- Auto door
- Cooling & filtering system, Hoffmam, Germany
- Flank twist compensation
- Flexible profile dressing function
- Noise reduction grinding function

## 主要外购件

- 数控系统
- 光栅尺及编码器
- 动平衡
- 直线导轨
- 主轴轴承
- 液压元件
- 密封件
- 滚珠丝杆
- 集中过滤系统
- CNC system
- Linear Scale and encoder
- Balance system
- Linear guideway
- Spindle bearings
- Hydraulic components
- Sealing components
- Ball screw
- Chip conveyer

## Commercial Components

- 德国 Siemens 840DSL
- 德国 HEIDENHAIN
- 德国 DITTEL
- 德国 Rexroth/SCHNEEBERGER
- 德国 FAG
- 德国 Rexroth
- 德国 Busak+Shamban/Freudeberg
- 德国 Steinmeyer/ 日本 THK
- 国产
- Siemens 84DSL
- HEIDENHAIN/Germany
- DITTEL/Germany
- Rexroth/SCHNEEBERGER, Germany
- FAG/Germany
- Rexroth, Germany
- Busak+Shamban/Freudenberg, Germany
- Steinmeyer, Germany/THK, Japan
- Made in China

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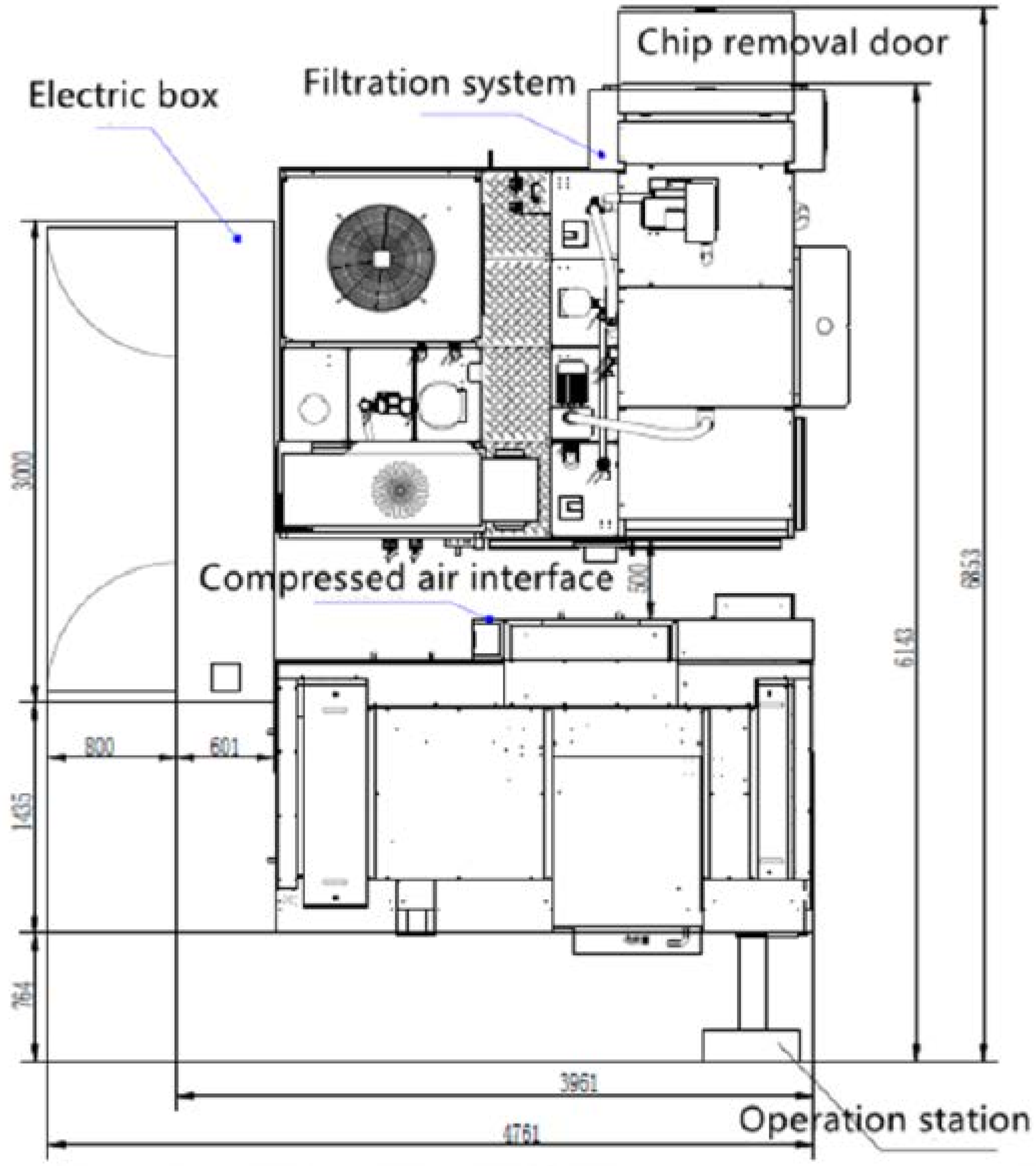
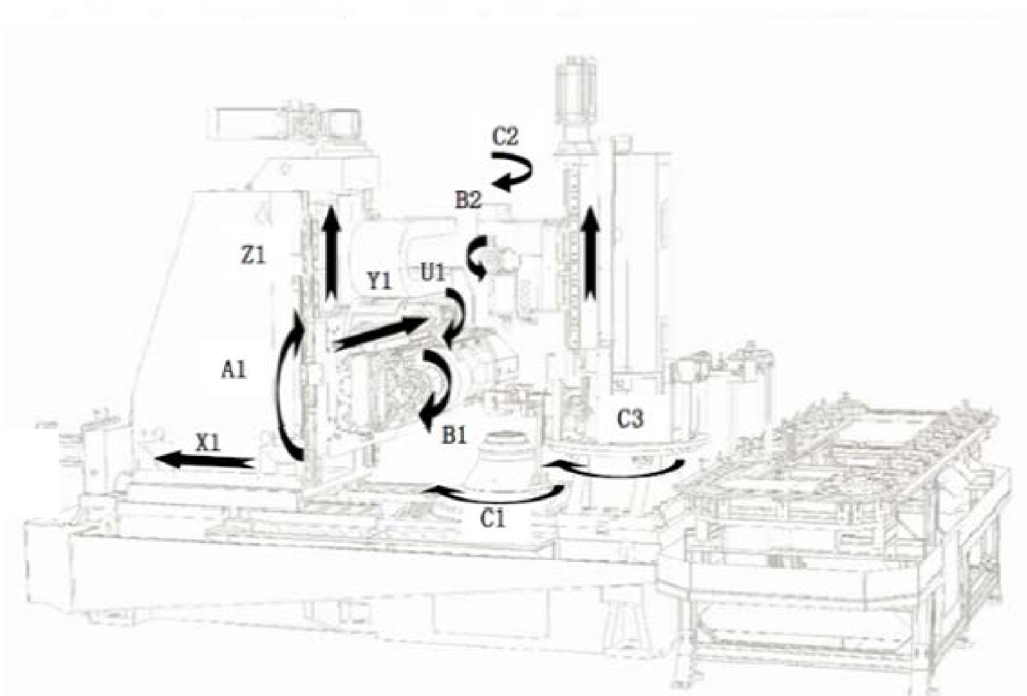
## 安装基础图 Foundation Plan




# YS7250
# CNC Universal Gear Grinding Machine
## YS7250 数控万能磨齿机

# YS7250 数控万能磨齿机

GUDWILL

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# CNC Universal Gear Grinding Machine

NGG 万能磨齿机

## 主要特点

- 机床为 11 轴数控、五轴联动数控万能磨齿机，数控轴为：A1 — 磨齿刀架回转运动、B1 — 砂轮主轴旋转运动、B2 — 修整轮旋转运动、C1 — 工作台旋转运动、C2- 修整轮摆角运动、X1 — 砂轮径向进给运动、Y1 — 砂轮切向进给运动、Z1 — 砂轮轴向进给运动、Z2 — 外支架轴向运动、U1 轴—喷嘴移动、C3 轴—料爪回转轴；
- 机床采用经典的结构布局形式及最先进的磨削技术，将极高的生产效率和精密的齿轮磨削完美地结合；
- 机床具有展成磨削和成形磨削功能；
  机床通过控制系统的多通道控制平台，柔性控制 11 个数控轴，实现工件自动装夹、自动砂轮修整、高速自动对刀、AE 自动磨削工艺监控、自动分配磨削余量、自动磨削等整个加工过程的全自动控制；
- 砂轮主轴采用大功率电主轴直接驱动技术，配备内置动平衡装置和砂轮防碰撞装置，有效保证磨削质量；
- 工件主轴采用内装主轴电机直接驱动技术，并实现闭环控制，大大提高工件主轴的驱动刚性和动态响应速度；
- 砂轮主轴、工件主轴均采用强制循环水冷系统，使整个主轴系统具有极好的热平衡特性；
- 机床各直线运动部件采用高刚性滚动直线导轨并加光栅尺形成闭环控制，各滚珠丝杆副采用进口的带预加负荷的高精密丝杆，并采用高精度、高刚性进口组合轴承支承，提高了传动精度、可靠性、稳定性；
- 多种磨削软件可供选择，实现人机对话、齿轮的计算、齿轮数据库的管理及维护、齿轮磨削及砂轮修整程序的自动生成、各种磨削方式选择、齿形齿向修形等；
- 机床可配置齿面扭曲补偿功能（三截面修形功能）、点修整功能（柔性修形功能）、低噪音磨削功能（网纹磨削功能）等各种软件功能。
- 机床配置自动上下料机构、工件自动存储料仓、自动门等，降低操作强度，节省辅助时间，提高生产效率。
- 加工精度可达 GB/T10095.1-2008 标准 3-4 级。

## Main features

- It is of 11 axes with 5 axes coordinated controlled universal gear grinding machine. Its CNC axes are: A1-axis-----grinding head swivel motion; B1-axis-----grinding spindle rotary motion; B2-axis-----dressing wheel rotary motion; C1-axis-----worktable rotary motion; C2-----dressing wheel swive motion; X1-axis-----grinding wheel radial feed motion; Y1-axis-----grinding wheel tangential feed motion; Z1-axis-----grinding wheel axial feed motion; Z2-axis-----tailstock axial feed motion; U1-axis----nozzle travel; C3-axis-----loader swive motion.
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- Several devices, such as auto loading & unloading device, workpiece auto storage, auto door, and etc., are available to reduce operation strength, save auxiliary time and enhance production efficiency.
- Machining accuracy up to grade 3-4 of chinese standard GB/T10095.1-2008

## 主要技术参数 Main specifications

| 项目 | Description | 单位 Unit | YS7250 |
|---|---|---|---|
| 最大加工直径 | Max. worrlpiece dia. | mm | **500** |
| 最大加工模数 | Max. module | mm | **8** |
| 最大轴向行程 | Max. axial travel | mm | 600 |
| 砂轮最大安装直径 × 长度 | Max. grinding wheel dimension: dia.x length | mm | ∅ 3 00× ∅ 1 15×160 |
| 工作台面直径 | Worktable surface diameter | mm | 250 |
| 刀具最大回转角 | Max. grinding wheel swivel angle | deg | ±45° |
| 砂轮中心至工作台中心水平距离 | Center distance between grinding wheel and worktable | mm | 30-510 |
| 砂轮中心距工作台台面垂直距离 | Distance between grinding wheel axis and worktable surface | mm | 150-700 |
| 小立柱顶端面距工作台面距离 | Distace between center end face and worktable surface | mm | 415-780 |
| 切向最大行程 | Max. grinding wheel tangential travel | mm | 260 |
| 砂轮主轴最高转速 | Max. grinding wheel spindle speed | r/min | 10000 |
| 工作台最高转速 | Max. worktable speed | r/min | **610** |
| 径向快速移动速度 | Radial rapid travel | mm/min | 10000 |
| 切向快速移动速度 | Tangential rapid travel | mm/min | 10000 |
| 轴向快速移动速度 | Axial rapid travel | mm/min | 10000 |
| 电主轴功率 | Main motor power | kW | **38** |
| 机床电力总负荷 | Total power | kW | 75 |
| 主机重量 | Main machine weight | kg | **17000** |
| 机床包装箱 | No. of cases | | 三箱 3 cases in total |

备注：带 * 的技术规格需特殊订货。
Remarks: Technial specifications with symbol "*" are for special order.
注：以上参数如有更改，恕不另行通知。Note:specifications above are subject to change without notice.

## 标准配置

- 全密封护罩
- 油雾收集器
- 油冷机
- RJ45 USB
- 机床数据存储光盘
- 15" 显示
- 双手操作系统
- 安装工具
- 调整工具
- 
- 
- 机床减震垫铁
- 后立柱
- 液压系统
- 冷却系统
- 润滑系统
- 带空调的电气控制箱
- 门联锁装置
- 机床状态显示四色灯
- 集中过滤器
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- 水冷机

## Standard Attachments

- Fully-enclosed guards
- Oil mist collecter
- Oil chiller
- RJ45 USB
- Machine data storage disc
- 15" color display
- Dual-hand operation system
- Tools for installation
- Tools for adjustment
- 
- 
- Isolating vibration pads
- Workstay
- Hydraulic system
- Cooling system
- Lubrication system
- Electrical cabinet with air conditioner
- Interlock safety switch
- Four color tower light for indicating machine status
- Centralized filter
- Chip cart
- Water cooler

## 可选配置

- 自动门
- 冷却过滤系统：德国 Hoffmam
- 扭曲补偿功能
- 点修整功能
- 网纹磨削功能

## Optional Attachments

- Auto door
- Cooling & filtering system, Hoffmam, Germany
- Flank twist compensation
- Flexible profile dressing function
- Noise reduction grinding function

## 主要外购件

- 数控系统
- 光栅尺及编码器
- 动平衡
- 直线导轨
- 主轴轴承
- 液压元件
- 密封件
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- CNC system
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- Ball screw
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## Commercial Components

- 德国 Siemens 840DSL
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- 德国 Rexroth
- 德国 Busak+Shamban/Freudeberg
- 德国 Steinmeyer/ 日本 THK
- 国产
- Siemens 84DSL
- HEIDENHAIN/Germany
- DITTEL/Germany
- Rexroth/SCHNEEBERGER, Germany
- FAG/Germany
- Rexroth, Germany
- Busak+Shamban/Freudenberg, Germany
- Steinmeyer, Germany/THK, Japan
- Made in China