

## 滕州南锻数控机床有限公司

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由于产品不断升级，机床外观及技术参数等内容，如有改动恕不另行通知，请以实物为准。  
Due to product upgrade, machine appearance and technical parameters and technical parameters are subject to change without prior notice.

# 数控立车

NUMERICAL CONTROL

VERTICAL LATHE





# 公司简介

## COMPANY INTRODUCTION

滕州南锻数控机床有限公司是一家专注于液压机、冲床、剪板机、折弯机等机械制造的企業。我们在汽车制造、家电、五金制造、铁路制造、建筑行业、船舶制造和硬件加工等多个行业中具有广泛的应用。

我们的公司拥有一支经验丰富的专业团队，团队成员持续精益求精，追求卓越。我们有一个强大的研发团队，不断创新和改进我们的产品，以适应快速变化的市场需求。我们的产品以高品质、卓越的性能和长寿命而著名。

在滕州南锻数控机床有限公司，我们自豪地致力于提供卓越的产品和服务。我们执行严格的质量控制程序，以确保每个产品符合或超出客户的期望。此外，我们提供定制解决方案，以满足特定客户的需求。

我们坚信，我们的成功与客户的关系密不可分。因此，我们不断努力与客户建立牢固的关系，并为他们提供支持和指导，帮助他们实现自己的目标。

如果您对我们的产品或服务感兴趣，请立即联系我们。我们期待与您合作，并为您提供最佳的解决方案。我们的企业一直秉承着诚信、专业和创新的经营理念，同时注重环保和社会责任，致力于可持续发展，为客户和社会创造更大的价值。

Nadun Machinery Manufacture Co., Ltd. is an enterprise focusing on the manufacturing of hydraulic presses, punching machines, shearing machines, Hydraulic press brake and other machinery. We have a wide range of applications in many industries such as automobile manufacturing, home appliances, hardware manufacturing, railway manufacturing, construction industry, shipbuilding and hardware processing. Our company has an experienced and professional team, and team members continue to strive for excellence. We have a strong R&D team that constantly innovates and improves our products to adapt to the rapidly changing market needs. Our products are famous for their high quality, excellent performance and long life.

At Nadun Machinery Manufacture Co., Ltd., we are proud to be committed to providing excellent products and services. We implement strict quality control procedures to ensure that each product meets or exceeds customer expectations. In addition, we provide customized solutions to meet specific customer needs.

We firmly believe that our success is inseparable from the success of our customers. Therefore, we constantly strive to build strong relationships with our customers and provide them with support and guidance to help them achieve their goals.

If you are interested in our products or services, please contact us today. We look forward to working with you and providing you with the best solutions. Our company has always been adhering to the business philosophy of integrity, professionalism and innovation, while paying attention to environmental protection and social responsibility, committed to sustainable development, and creating greater value for customers and society.



### 资质荣誉

质量信誉双十佳单位  
山东省放心消费示范单位  
枣庄省放心消费示范单位  
“十佳”成长型企业  
学雷锋诚信单位

ISO9001：2015质量管理体系认证  
外观设计专利证书  
实用新型专利证书  
ISET资质认证

## MAIN PRODUCTS



VTC65



VTC45



VTC75

## » 本机床具有以下特点

1. 底座、立柱及滑座均采用高牌号灰口铸铁，且经过回火处理，确保机床具有高强度和长期使用的精度稳定性。
2. 机床采用滚柱型线性滑轨。具有超高的钢性和超重负载能力。大幅提升了机床纵横进给运动的定位精度和承载能力。
3. 伺服主电机与主轴通过同步齿形皮带连接，确保工件的重复定位精度，无级变速，且变速范围广可满足不同零部件的粗加工和精加工对主轴转速的不同要求。
4. 纵向和横向进给均由大功率伺服电机控制自动进给。纵向进给安装了负载平衡机构，有效减轻了丝杠的负载，大大延长了丝杠的使用周期。
5. 机床纵向和横向滚珠丝杠两端支撑均采用进口双排轴承，大大提高和保证机床对零部件的加工精度。
6. 机床采用可调节电动润滑油泵对各部位采用间歇方式自动润滑，确保各导轨、丝杠的润滑，保证各运动部位的使用精度。
7. 机床刀架采用卧式或立式多工位数控刀架一次装夹刀具，换刀时间短，大大提高工作效率。
8. 主轴上端可根据用户要求配置圆盘式工作台或液压卡盘。主轴下端可配置回转油缸，油缸分为单活塞和双活塞两种。单活塞缸可用于控制工装压紧工件或控制液压卡盘。双活塞缸则一个油缸控制液压卡盘，另一个缸控制工装压紧工件。



## » This CNC Vertical Lathe has the following characteristics

1. The base, column and sliding seat are all made of high-grade gray cast iron and have been tempered. Ensure that the machine tool has high strength and precision stability for long-term use.
2. The machine adopts roller-type linear slides. It has super high rigidity and heavy load capacity. The positioning accuracy, load-carrying capacity of vertical and horizontal feed movement are greatly improved.
3. The spindle pulley of the machine tool and the spindle CNC servo motor pulley are connected by a belt, and can be configured with 18.5Kw or 2kw motors continuous variable speed, and wide speed range. It can meet the different requirements of the spindle speed for rough machining and finishing of parts.
4. The vertical and horizontal feeds are controlled by the servo motor automatically. There are protective devices in both directions, and a load balancing mechanism is installed in the vertical direction, which reduces the load of the lead screw and greatly extends the life cycle of the lead screw.
5. Both ends of the ball screw in the vertical and horizontal directions of the machine tool are supported by special screw bearings, which greatly improves and guarantees the machining accuracy of the machine tool's parts.
6. The machine tool adopts an electric lubricating oil pump to automatically lubricate each part in an intermittent manner to ensure the lubrication of each guide rail pair and ball screw pair, which can prolong the service life of each movement pair.
7. The tool post adopts horizontal or vertical multi-station CNC tool post, which has short tool change time and greatly improves work efficiency.
8. The upper end of the spindle can be equipped with a disc table or hydraulic chuck according to user requirements. The lower end of the main shaft can be equipped with a rotary oil cylinder, which is divided into single piston and double piston. The single piston cylinder can be used to control the tooling to compress the workpiece or to control the hydraulic chuck. With dual-piston cylinders, one cylinder controls the hydraulic chuck, and the other cylinder controls the tooling to compress the workpiece.

# 功能特点

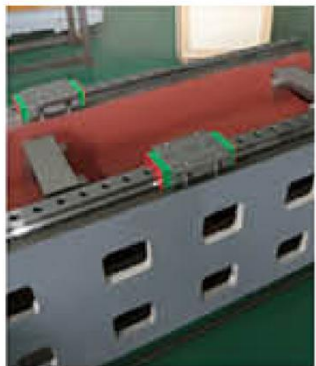
## Functional characteristics



### 主轴 Spindle

主轴轴承采用双列滚柱轴承，轴向采用双向推力角接触球轴承，可提供轴向497KN 的最大载荷，为得到主轴的最大刚性，轴承的接触面积达到 98% 以上，远高于行业规定的85%，且主轴径跳 / 端跳均0.003mm以内。整体式主轴单元，回转精度高；进口滚柱直线导轨，预拉式丝杆支承，兼顾切削刚性及定位精度。

The spindle's bearing adopts double-row roller bearings, and the axial direction adopts two way thrust angular contact ball bearings, which can provide a maximum axial load of 497KN. In order to obtain the maximum rigidity of the spindle, the contact area of the bearing reaches more than 98%, which is much higher than the industry regulations 85%, and the spindle diameter radial beat / end face jump are both within 0.003mm. Integral spindle unit, high rotation accuracy; imported linear roller guide rail, Pre-drawn screw support, taking into account cutting rigidity and positioning accuracy.



### 大行程设计 Large stroke design

为满足以刹车毂为代表的薄壁深孔加工，在刀塔中心加装复合刀杆，可以实现无需退刀便可在工件内完成换刀，可大幅度提升加工效率。用于加工直径大、长度短的大型、重型工件与不易在卧式车床上装夹的工件。

In order to satisfy the thin-walled deep hole processing represented by the brake hub, a composite tool bar is installed in the center of the turret, which can realize the tool change in the workpiece without retracting the tool, which can greatly improve the processing efficiency. It is used to process large and heavy workpieces with large diameter and short length and workpieces that are not easy to be clamped on a horizontal lathe.



### 主轴传动 Spindle drive

主轴传动分为伺服电机通过同步带直接驱动主轴，实现更大扭矩输出。

The spindle drive is divided into a servo motor that directly drives the spindle through a timing belt to achieve greater torque output.



### 轴向进给 Axial feed

Z轴作为垂直轴，长期承担更大的载荷，相对于平行轴导轨丝杠更易磨损。Z轴采用截面55mm 滚柱型导轨，丝杠直径 50mm 做为标配。以实现轴向进给的刚度及长期精度的保持。

As a vertical axis, the Z axis bears greater load for a long time, and is easier to wear than the parallel axis guide screw. The Z-axis adopts a 55mm roller-type guide rail with a screw diameter of 50mm as standard equipment. In order to achieve the rigidity of the axial feed and the maintenance of long-term accuracy.



### 数控系统 Numerical control system

常用的数控系统：

- 1、国产数控系统：广数系统GSK、成都广泰、北京凯恩帝KND、华中数控系统
- 2、进口数控系统：德国西门子数控系统SIEMENS、日本三菱、日本发那科FANUC

Commonly used numerical control system:

1. Domestic numerical control system: GSK, Chengdu, Guang Tai, Beijing, Kandi KND. Huazhong numerical control system
2. Imported CNC system: SIEMENS CNC system in Germany, Mitsubishi in Japan. FANUC Fanuc, Japan

# 结构展示

## Structural display

### 品牌主轴

#### Brand spindle

主轴上端可根据用户要求配置圆盘式工作台或液压卡盘，高效率、低噪声、低振动。以满足机床低速大扭矩及高速大功率等各种条件的切削要求。

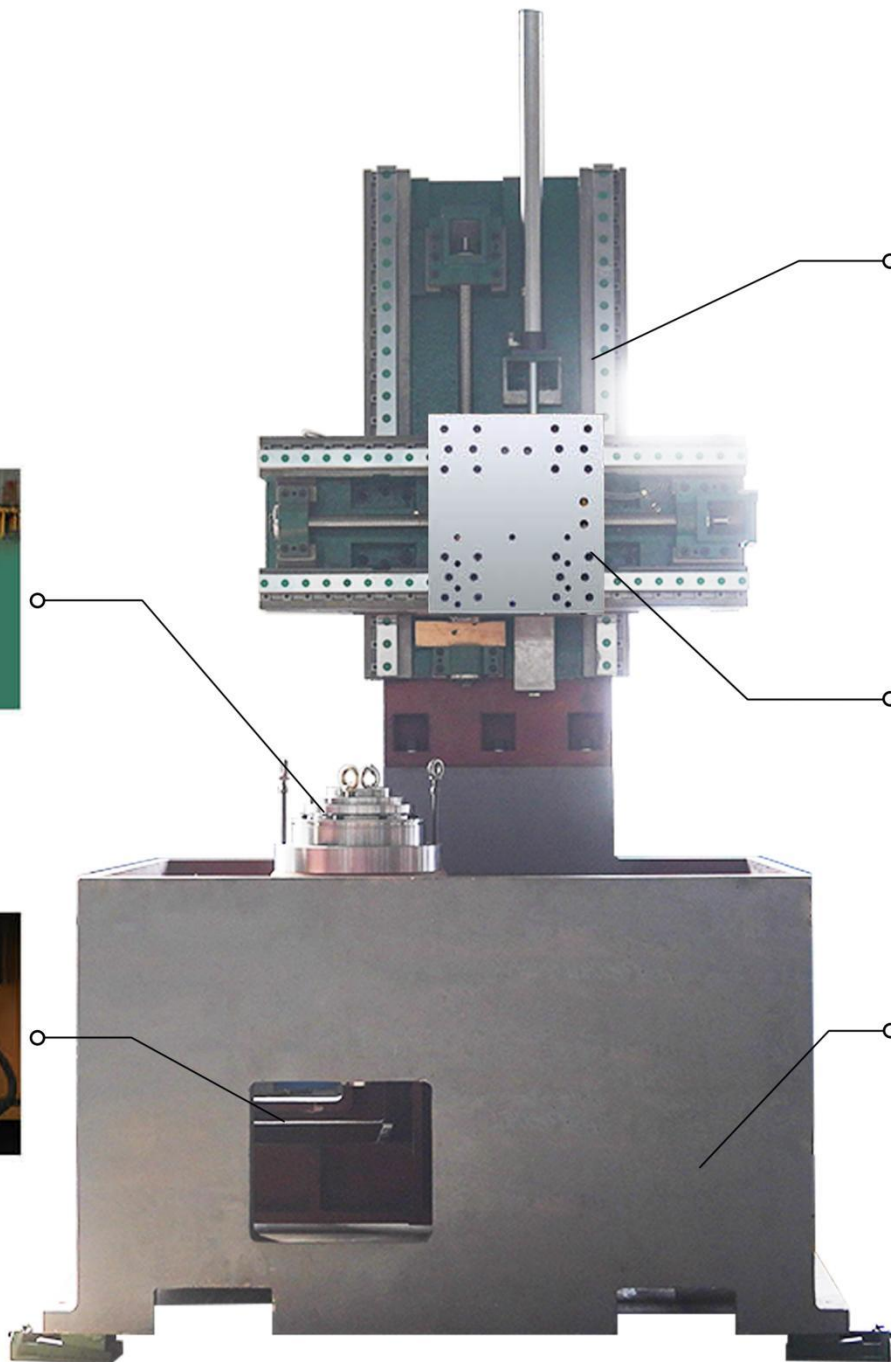
The upper end of the spindle can be equipped with a disc table or hydraulic chuck according to the user's requirements, with high efficiency, low noise and low vibration, so as to meet the cutting requirements of various conditions such as low speed, high torque, high speed and high power of the machine tool.

### 稳定的动力系统

#### Stable dynamic system

伺服主电机与主轴通过同步齿形皮带连接，确保工件的重复定位精度，无级变速，且变速范围广可满足不同零部件的粗加工和精加工对主轴转速的不同要求。

The main motor of the same suit is connected with the spindle through the synchronous toothed belt, which ensures the repeated positioning accuracy of the workpiece, stepless speed change and wide speed change range, and can meet the different requirements of rough machining and finishing of different parts on the spindle speed.



### 大跨距中驱设计

#### Long-span central district design

滚珠丝杠两端固定采用与机体整体铸造，支撑轴承采用单元式的结构固定，虽加工难度大装配工艺复杂，但刚性及轴承使用寿命分别能够提升 20% 和25%。丝杠在运动轴向中心，提供高精度与重负荷之轴向进给力，避免因偏置驱动所产生的受力不均等现象发生。

The two ends of the ball screw are fixed by integral casting with the machine body, and the supporting bearing is fixed by unit structure. Although the processing is difficult and the assembly process is complicated, the rigidity and service life of the bearing can be improved by 20% and 25% respectively. The lead screw is in the axial center of motion, providing high-precision and heavy-load axial feeding force, avoiding uneven stress caused by offset driving.

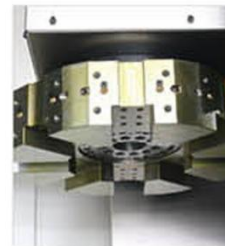


### 多工位刀塔

#### Multi-station turret

机床刀架采用卧式或立式多工位数控刀架，换刀时间短，大大提高工作效率，八工位刀塔一次装夹让工艺更简单。

The tool rest of the machine tool adopts horizontal or vertical multi-station CNC tool rest, which shortens the tool changing time and greatly improves the work efficiency. The eight-station tool tower is clamped once to make the process simpler.



### 坚固的基座设计

#### Robust base design

坚固的基座结构是确保设备在长期使用中发挥最高刚性及稳定性的基础，除了借助于先进的设计工具进行分析优化外，实际生产中用材更是高出优化标准的15%，内部的加肋采用米字型结构配合十字交叉布局进行加固，以降低扭曲变形。

A solid base structure is the basis to ensure the highest rigidity and stability of the equipment in long-term use. Besides the analysis and optimization with the help of advanced design tools, the material used in actual production is 15% higher than the optimization standard, and the internal ribbed structure is reinforced with the cross layout to reduce the distortion.

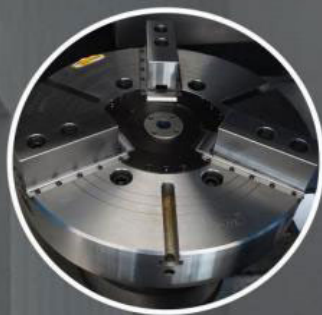


数控立式车床

# VTC75

数控立式车床，同级内回转直径大，X轴行程大

CNC vertical lathe, large rotation diameter in the same level, large X-axis stroke



750数控立车以大回转直径和大行程设计，重点突出刚性及大扭矩强力切削，不仅标准刀具过主轴中心，也可以加装特殊刀杆后实现刀塔中心过主轴中心，既有通用机床的灵活性，也有专用机床的高效率。



## 功能特点

Functional characteristics

台湾卧式8工位刀架，该系列刀架由伺服电机控制转位，可以双向快速选刀，液压锁紧，刚性极高；台湾立式四工位伺服刀架，该刀架具有极佳的设计结构和高刚性采用伺服技术转位、分度和液压锁紧，转位、分度平稳准确，特别适合加工汽车行业零件。



南锻数控  
NANDUAN



数控立式车床

# VTC65

数控立式车床，同级内回转直径大，X轴行程大

CNC vertical lathe, large rotation diameter in the same level, large X-axis stroke

VTC系列数控立式CNC车床以高刚性结构组合精密线轨为基础，搭载油压定位刀塔与高扭矩输出之强力主轴，使得本系列机床能以优越的品质提供您最强悍的切削性能。



## 领域应用

Domain application

### 主要功能：

刹车盘双面刀，确保加工过程中的平行精度和表面光洁度的同时，大大提高了工作效率。

The brake disc double-sided cutter ensures the parallel precision and surface finish in the process of machining, and greatly improves the work efficiency.



机器参数

Machine parameters

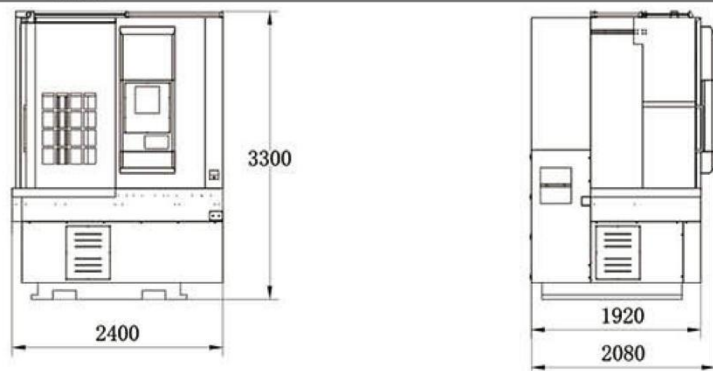
项 目 Project	规格 Specifications	单 位 Unit	VTC45	VTC65	VTC75	VTC100	VTC1250
加工能力 Processing capacity	最大回转直径 Maximum rotary diameter	mm	φ 560	φ 650	φ 750	φ 1000	φ 1250
	最大切削直径 Maximum cutting diameter	mm	φ 450	φ 600	φ 700	φ 800	φ 1000
主 轴 Principal axis	主轴端面形式 Spindle end face form		直口 Naoko	直口 Naoko	直口 Naoko	直口 Naoko	直口 Naoko
	主轴转速 Speed of mainshaft	r pm	100-2000	100-1000	100-1000	100-800	50-500
	卡盘外径 Outside diameter of chuck	mm	500	500	610	630	630
刀塔 Knife tower	刀具容量 Tool capacity	pc	卧式八工位 Horizontal eight-station	卧式八工位 Horizontal eight-station	卧式八工位 Horizontal eight-station	卧式八工位 Horizontal eight-station	卧式八工位 Horizontal eight-station
行程 Schedule	X轴行程 X-axis stroke	mm	400	420	700	700	700
	Z轴行程 Z-axis stroke	mm	500	500	700	700	700
液压单元 Hydraulic unit	油箱容量 Oil tank capacity	L	40	40	40	40	40
	油压马达 Hydraulic motor	kw	2. 2	2. 2	2. 2	2. 2	2. 2
马达 Motor	主轴伺服马达 Spindle servo motor	kw	15	18. 5	22	22	22
精度 Precision	重复定位精度 Repetitive positioning accuracy	mm	± 0. 008	± 0. 005	± 0. 005	± 0. 005	± 0. 005
	定位精度 Positioning accuracy	mm	± 0. 008	± 0. 008	± 0. 008	± 0. 008	± 0. 008
机床外形 Machine tool shape	长*宽*高 Length * Width * Height	mm	2200*2300*2600	2150*2210*2970	2700*2100*3200		
	重量（含附件） Weight (including accessories)	kg	5000	7000	9500	10000	11000
电力需求 Power demand	电 源 Power Supply		3 Ø -AC 380V 50HZ ± 5%				
	机床具有漏电保护、断电保护 Machine tools have leakage protection and power failure protection		√				
	机床工作状态三色灯指示 Three-color light indication of machine tool working state		√				
	机床在下列条件下长期稳定工作 The machine tool works stably for a long time under the following conditions		环境温度5~38° The ambient temperature is 5 ~ 38				
			环境湿度 < 85% ° Ambient humidity < 85%				
	机床噪音符合国家标准 Machine tool noise meets national standards		√				
备 注 Remarks	☆设备采用全封闭防护，防护装置安全可靠，应符合GB15760-1995金属切削机床安全防护通用技术条例。 ☆配置各种液压、气、水管路方向标识，标识各种仪表工作范围，标识使用介质牌号。 ☆液压卡盘直径和刀架工位可根据加工要求选配。  The equipment is fully enclosed, and the protective device is safe and reliable, which should comply with the general technical regulations for safety protection of metal cutting machine tools (GB15760-1995). Configure all kinds of hydraulic, gas and water pipeline direction marks, mark the working range of all kinds of instruments, and mark the brand of medium used. The diameter of hydraulic chuck and tool rest station can be selected according to machining requirements.						

说明：详细参数以技术协议为准。

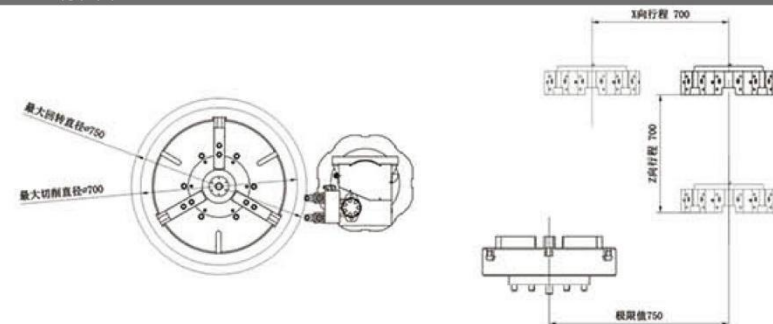
# 结构示意图

Structural representation

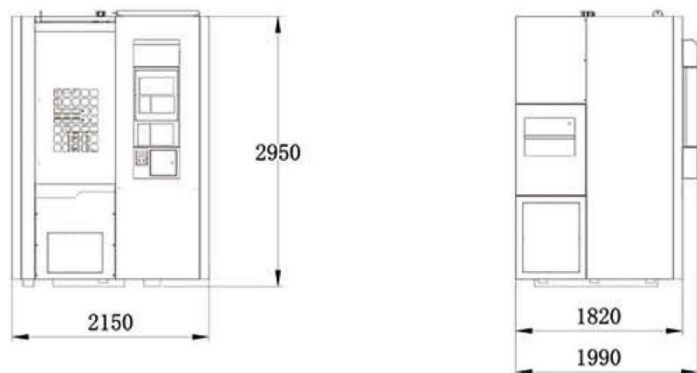
VTC750 外形图



VTC750 行程图



VTC650 外形图



VTC650 行程图

