

协作码垛工作站

Collaborative Palletizing Workstation



深圳市华盛控科技有限公司

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董事长寄语

Message from the chairman

目前，全球处于工业4.0发展时期，以机器人技术为代表的智能装备产业正蓬勃兴起，中国已成为全球最大工业机器人应用市场。

面对智能时代带来的机遇和挑战，我们华盛控始终坚持以创新为本，专注于智能机器人技术研发与应用，努力为客户提供满足其个性化需求的高品质智能定制产品——这是我们不变的承诺。

我们感恩时代的馈赠，也一直在思考和探索，能为这个时代多做些什么？

成为中国智能机器人行业的智造先锋，为推动“中国制造”向“中国智造”转型升级的梦想贡献我们的力量，就是我们的目标。

不畏挑战，创造未来。我们始终怀着诚信之心，与合作伙伴风雨同舟，共谋发展，致力成为“全球最具有竞争力的智能机器人科技企业”。

智，无止境；华盛控，矢志前行。



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企业概况

Company Profile

深圳市华盛控科技有限公司成立于2011年，是一家机器人及相关产品的研发、生产、销售为一体的国家级高新技术企业。是以工业机器人核心技术，国际一流的，自动化方案提供商。我们的产品涵盖并联机器人、全系列协作机器人、工业视觉及机器人控制系统等系列，广泛应用于医药、3C、食品、印包、日化等多个行业领域。

从立足中国，到迈向全球。华盛控始终以客户为中心，以专业的工匠精神，为客户量身定制独一无二的全产业链机器人科技研发解决方案，成为机器人行业应用中的典范。产品出口欧美、中东、东南亚等50多个国家和地区。

持续发展，以卓越的品质、价值和服务满足客户的需求，尊重社会和自然环境，成为让员工引以为荣的企业。

Established in 2011, Shenzhen Warsonco Technology Co., Ltd. is a national high-tech enterprise integrating research and development, production and sales of robots and related products. Warsonco Technology is first-class, automation solution provider with the core technology focusing on industrial robot. Our products cover parallel robots, full series of Collaborative Robots industrial vision and robotic control systems etc., and the products are widely used in many fields such as pharmaceuticals, 3C, food, packaging, daily chemical and others.

From taking the footprint in China to moving globally now, Warsonco Technology has always been customer-centered, with high standard professionalism, customized the unique tailor-made R&D solution for industry chain robots, becoming a model for the application of industrial robots. Our products are exported to more than 50 countries and regions such as Europe, America, Middle East and Southeast Asia.

By focusing on sustainable development, excellent quality, value and service to meet customers' needs, while respecting the society and natural environment, Warsonco Technology is becoming an enterprise that makes employees proud of being a member.

50⁺

产品出口50多个国家和地区

180⁺

华盛控科技累积各项专利80多项，其他各项荣誉100多种。

4600⁺

累积服务客户4600多家。

企业荣誉 Enterprise Honor

华盛控坚持重技术、优服务，在高精机器人领域潜心研究，致力于掌握机器人控制核“芯”技术，已经取得80多项国家专利，为不同行业的企业量身定制更精准、更智能、更优质的智能产品和全自动智能生产解决方案。

Warsonco Technology adheres to technology and excellent service, devotes itself to researching in the field of high-precision robotics and is committed to mastering robot control core "core" technology. It has obtained more than 80 national patents, customizing more accurate, smarter and better-quality intelligent products and full-automatic intelligent production solutions for enterprises in different industries.



发明专利：16项
Patent inventions

软件产品：7款
Software products

软件专利：24项
Software patents

实用新型专利：33项
Utility model patents

外观设计专利：11项
Appearance design patents

创新比赛荣誉：49项
Honor and prizes in Innovation Competition

社会和行业认可荣誉：58项
Social and industry recognized honors



协作码垛工作站

Collaborative palletizing workstation

全球已进入工业4.0智能工厂时代，我国作为全球最大的工业机器人应用市场，其中码垛机器人产业高速发展。机器人、人、作业环境三者之间的有效结合与互动已经是未来趋势，将成为推动我国制造业发展的一大助力。

The world has entered the era of industrial 4.0 intelligent factory. As the largest industrial robot application market in the world, the palletizing robot industry develops rapidly. Effective combination and interaction among robots, human beings and working environment has become a trend in the future, and will be a great boost to the development of manufacturing industry in China.

协作码垛重新定义了易用性:

Collaborative palletization redefines the concept of "ease of use":

- 2小时可完成安装调试。
Installation and re-adjustment can be completed within 2 hours.
- 5分钟内可设置新的路径。
New path set-up within 5 minutes.
- 每分钟可堆垛8-10个箱子。
8-10 boxes can be stacked per minute.
- 最多可设置800个码垛路径。
Up to 800 stacking paths can be set.
- 托盘尺寸最大能支持1300mmx1200mm。
Maximum tray size 1300mm x 1200mm
- 可同时堆垛2种产品。
Two products can be stacked simultaneously.
- 带有标签方向功能。
With label orientation function.



准备 → 码垛方式设置
A垛码放 → B垛码放 → 完成

Collaborative Robot 协作机器人

国际一流的大负载协作机器人,安全、高效、高性价比。
International first-class heavy-load cooperative robot, safe, efficient and cost-effective.

Frame Assembly 机架组件

便携移动式底座,应用更方便;
第七轴升降柱。
Portable mobile base for more convenient application;
7th axle lifting column.

End effector 末端执行器

轻便简约型设计,
大吸力防掉落,专利产品。
Lightweight and simple design,
large suction and anti-dropping, patented products.

Card Positioning System 卡板定位系统

机械式卡板定位系统,简便实用。
Mechanical card positioning system is simple and practical.



Operating system 操作系统

12.1寸高灵敏电容式触摸屏/7寸一体电脑
WSC协作码垛机器人系统V1.0
12.1 inch high sensitive capacitive touch screen/7-inch integrated computer;
WSC collaborative palletizing robot system V1.0

Electric box control cabinet 电箱控制柜

自主研发,低能耗、高配置,集成电控柜。
Independent research and development in the company, low energy consumption, high configuration, integrated electric control cabinet.

协作码垛优势分析

Advantages of Collaborative Palletizer



简易编程

Simple programming

图形化编程、简单高效, 无需精通编程语言即可轻松使用机器人。

半小时可掌握编程方式, 1小时可完成简易编程。

Visual programming is simple and efficient, and ordinary employees can easily manipulate robots without having to master the programming language.

The programming mode can be learned in half an hour and simple programming can be completed in 1 hour.



安全稳定

Safety and stability

工业级力控传感器, 具有高度的可靠性和安全性;

支持10级碰撞检测和传感器安全检测;

发生单一故障时不会丧失安全功能;

Industrial grade force-sensor with high reliability and safety; Support 10-level collision detection and sensor safety detection; without loss of safety function in case of single fault;



部署灵活

Flexible deployment

集成设计, 轻便灵活, 占地面积小;

工作站部署新任务设置简单快捷, 效率高;

Integrated design, light and flexible, small footprint area; Workstation deployment of new task setting is simple, quick and efficient;



应用广泛

Wide applications

广泛应用于食品、医药、3C、日化、印刷等行业领域;

Widely used in food, pharmaceuticals, 3C, daily chemistry, e-commerce and other industries;



柔性生产

Flexible Production

多种功能场景快速切换, 可以采用人机协作, 双机协作、多机协作等实现柔性化生产。

With fast switching of various functional scenarios, flexible production can be realized by human-machine cooperation, dual-computer cooperation and multi-computer cooperation.



经济实用

Economic and practical

平均6-12个月收回投资成本。

Average recovery of investment within 6-12 months;

WSC-MD12 系列



操作简单 Easy to operate

图形化编程、简单高效, 无需精通编程语言即可轻松使用机器人。

半小时可掌握编程方式, 1小时可完成简易编程。

Visual programming is simple and efficient, and ordinary employees can easily manipulate robots without having to master the programming language. The programming mode can be learned in half an hour and simple programming can be completed in 1 hour.



灵活部署 Flexible deployment

集成设计, 轻便灵活, 占地面积小; 工作站部署新任务设置简单快捷, 效率高;

Integrated design, light and flexible, small footprint area; Workstation deployment of new task setting is simple, quick and efficient;



应用广泛 Wide Applications

广泛应用于食品、医药、3C、日化、印刷等行业领域。

Widely used in food, pharmaceuticals, 3C, daily chemistry, e-commerce and other industries.



产品参数

型号 Model	WSC-MD12G	WSC-MD12S
负载 Load	12kg	12kg
工作半径 Working radius	1900mm	1900mm
水平距离 (卡板规格) Horizontal distance (Specification of cardboard)		
垂直距离 Vertical distance	固定式H1=1700mm	升降式H2=2400mm
码垛速度 Stacking speed	≤ 8 pcs/min	≤ 8 pcs/min
重复定位精度 Repeated positioning accuracy	±0.04mm	±0.04mm
通讯方式 Communication mode	TCP/IP	TCP/IP
IP等级 Level Ip	Ip54	Ip54
温度范围 Temperature Range	0-55°C	0-55°C
最大功耗 Maximum Power Dissipation	2.5kw	3.3kw
电箱供电 Power supply from electric box	单相220v / 50HZ	单相220v / 50HZ
整机重量 Whole machine weight	≈260kg	≈300kg
占地面积 Floor area	1505*1716mm	1505*1716mm

码垛工作站拓展配置方案

进一步保障码垛工作站的安全性。

激光雷达传感器

- 无接触、灵活设置检测距离
- 靠近黄色区域报警减速
- 进入红色区域立即停机

光栅传感器

- 性能稳定, 抗干扰能力强
- 感应灵敏度高, 快速反应
- 使用寿命长

安全围栏

- 物理防护, 安全可靠

WSC-MD16 系列

wsc-md16 series



操作简单 Easy to operate

图形化编程、简单高效, 无需精通编程语言即可轻松使用机器人。

半小时可掌握编程方式, 1小时可完成简易编程。

Visual programming is simple and efficient, and ordinary employees can easily manipulate robots without having to master the programming language. The programming mode can be learned in half an hour and simple programming can be completed in 1 hour.



灵活部署 Flexible deployment

集成设计, 轻便灵活, 占地面积小; 工作站部署新任务设置简单快捷, 效率高;

Integrated design, light and flexible, small footprint area; Workstation deployment of new task setting is simple, quick and efficient;



应用广泛 Wide Applications

广泛应用于食品、医药、3C、日化、印刷等行业领域。

Widely used in food, pharmaceuticals, 3C, daily chemistry, e-commerce and other industries.



产品参数

型号 Model	WSC-MD16G	WSC-MD16S
负载 Load	16kg	16kg
工作半径 Working radius	1900mm	1900mm
水平距离 (卡板规格) Horizontal distance (Specification of cardboard)		
垂直距离 Vertical distance	固定式H1=1700mm	升降式H2=2400mm
码垛速度 Stacking speed	≤ 8 pcs/min	≤ 8 pcs/min
重复定位精度 Repeated positioning accuracy	±0.04mm	±0.04mm
通讯方式 Communication mode	TCP/IP	TCP/IP
IP等级 Level Ip	Ip54	Ip54
温度范围 Temperature Range	0-55°C	0-55°C
最大功耗 Maximum Power Dissipation	2.5kw	3.3kw
电箱供电 Power supply from electric box	单相220v / 50HZ	单相220v / 50HZ
整机重量 Whole machine weight	≈260kg	≈300kg
占地面积 Floor area	1505*1716mm	1505*1716mm

码垛工作站拓展配置方案

进一步保障码垛工作站的安全性。

激光雷达传感器

- 无接触、灵活设置检测距离
- 靠近黄色区域报警减速
- 进入红色区域立即停机

光栅传感器

- 性能稳定, 抗干扰能力强
- 感应灵敏度高, 快速反应
- 使用寿命长

安全围栏

- 物理防护, 安全可靠

WSC-MD20 系列

wsc-md20 series



操作简单 Easy to operate

图形化编程、简单高效, 无需精通编程语言即可轻松使用机器人。
半小时可掌握编程方式, 1小时可完成简易编程。

Visual programming is simple and efficient, and ordinary employees can easily manipulate robots without having to master the programming language.
The programming mode can be learned in half an hour and simple programming can be completed in 1 hour.



灵活部署 Flexible deployment

集成设计, 轻便灵活, 占地面积小;
工作站部署新任务设置简单快捷, 效率高;

Integrated design, light and flexible, small footprint area;
Workstation deployment of new task setting is simple, quick and efficient;



应用广泛 Wide Applications

广泛应用于食品、医药、3C、日化、印刷等行业领域。

Widely used in food, pharmaceuticals, 3C, daily chemistry, e-commerce and other industries.



产品参数

型号 Model	WSC-MD20G	WSC-MD20S
负载 Load	20kg	20kg
工作半径 Working radius	1600mm	1600mm
水平距离 (卡板规格) Horizontal distance (Specification of cardboard)		
垂直距离 Vertical distance	固定式H1=1600mm	升降式H2=2100mm
码垛速度 Stacking speed	≤ 8 pcs/min	≤ 8 pcs/min
重复定位精度 Repeated positioning accuracy	±0.04mm	±0.04mm
通讯方式 Communication mode	TCP/IP	TCP/IP
IP等级 Level Ip	Ip54	Ip54
温度范围 Temperature Range	0-55°C	0-55°C
最大功耗 Maximum Power Dissipation	2.5kw	3.3kw
电箱供电 Power supply from electric box	单相220v / 50HZ	单相220v / 50HZ
整机重量 Whole machine weight	≈260kg	≈300kg
占地面积 Floor area	1505*1716mm	1505*1716mm

码垛工作站拓展配置方案

进一步保障码垛工作站的安全性。

激光雷达传感器

- 无接触、灵活设置检测距离
- 靠近黄色区域报警减速
- 进入红色区域立即停机

光栅传感器

- 性能稳定, 抗干扰能力强
- 感应灵敏度高, 快速反应
- 使用寿命长

安全围栏

- 物理防护, 安全可靠

WSC-MD25 系列

wsc-md25 series



操作简单 Easy to operate

图形化编程、简单高效, 无需精通编程语言即可轻松使用机器人。

半小时可掌握编程方式, 1小时可完成简易编程。

Visual programming is simple and efficient, and ordinary employees can easily manipulate robots without having to master the programming language. The programming mode can be learned in half an hour and simple programming can be completed in 1 hour.



灵活部署 Flexible deployment

集成设计, 轻便灵活, 占地面积小;
工作站部署新任务设置简单快捷, 效率高;

Integrated design, light and flexible, small footprint area;
Workstation deployment of new task setting is simple, quick and efficient;



应用广泛 Wide Applications

广泛应用于食品、医药、3C、日化、印刷等行业领域。

Widely used in food, pharmaceuticals, 3C, daily chemistry, e-commerce and other industries.



产品参数

型号 Model	WSC-MD25G	WSC-MD25S
负载 Load	25kg	25kg
工作半径 Working radius	1600mm	1600mm
水平距离 (卡板规格) Horizontal distance (Specification of cardboard)		
垂直距离 Vertical distance	固定式H1=1600mm	升降式H2=2100mm
码垛速度 Stacking speed	≤ 6 pcs/min	≤ 6 pcs/min
重复定位精度 Repeated positioning accuracy	±0.04mm	±0.04mm
通讯方式 Communication mode	TCP/IP	TCP/IP
IP等级 Level Ip	Ip54	Ip54
温度范围 Temperature Range	0-55°C	0-55°C
最大功耗 Maximum Power Dissipation	3.3kw	4.2kw
电箱供电 Power supply from electric box	单相220v / 50HZ	单相220v / 50HZ
整机重量 Whole machine weight	≈260kg	≈300kg
占地面积 Floor area	1505*1716mm	1505*1716mm

码垛工作站拓展配置方案

进一步保障码垛工作站的安全性。

激光雷达传感器

- 无接触、灵活设置检测距离
- 靠近黄色区域报警减速
- 进入红色区域立即停机

光栅传感器

- 性能稳定, 抗干扰能力强
- 感应灵敏度高, 快速反应
- 使用寿命长

安全围栏

- 物理防护, 安全可靠

WSC-MD30 系列

wsc-md30 series



操作简单 Easy to operate

图形化编程、简单高效, 无需精通编程语言即可轻松使用机器人。

半小时可掌握编程方式, 1小时可完成简易编程。

Visual programming is simple and efficient, and ordinary employees can easily manipulate robots without having to master the programming language. The programming mode can be learned in half an hour and simple programming can be completed in 1 hour.



灵活部署 Flexible deployment

集成设计, 轻便灵活, 占地面积小; 工作站部署新任务设置简单快捷, 效率高;

Integrated design, light and flexible, small footprint area; Workstation deployment of new task setting is simple, quick and efficient;



应用广泛 Wide Applications

广泛应用于食品、医药、3C、日化、印刷等行业领域。

Widely used in food, pharmaceuticals, 3C, daily chemistry, e-commerce and other industries.



产品参数

型号 Model	WSC-MD30G	WSC-MD30S
负载 Load	30kg	30kg
工作半径 Working radius	1460mm	1460mm
水平距离 (卡板规格) Horizontal distance (Specification of cardboard)	<p>码垛机器人水平覆盖范围半径:1460mm 栈板最大允许应用尺寸:1000*1200mm</p>	
垂直距离 Vertical distance	固定式H1=1600mm	升降式H2=2100mm
码垛速度 Stacking speed	≤ 6 pcs/min	≤ 6 pcs/min
重复定位精度 Repeated positioning accuracy	±0.04mm	±0.04mm
通讯方式 Communication mode	TCP/IP	TCP/IP
IP等级 Level Ip	Ip54	Ip54
温度范围 Temperature Range	0-55°C	0-55°C
最大功耗 Maximum Power Dissipation	3.3kw	4.2kw
电箱供电 Power supply from electric box	单相220v / 50HZ	单相220v / 50HZ
整机重量 Whole machine weight	≈260kg	≈300kg
占地面积 Floor area	1505*1716mm	1505*1716mm

码垛工作站拓展配置方案

进一步保障码垛工作站的安全性。

激光雷达传感器

- 无接触、灵活设置检测距离
- 靠近黄色区域报警减速
- 进入红色区域立即停机

光栅传感器

- 性能稳定, 抗干扰能力强
- 感应灵敏度高, 快速反应
- 使用寿命长

安全围栏

- 物理防护, 安全可靠

WSC-MD40 系列

wsc-md40 series



操作简单 Easy to operate

图形化编程、简单高效, 无需精通编程语言即可轻松使用机器人。
半小时可掌握编程方式, 1小时可完成简易编程。

Visual programming is simple and efficient, and ordinary employees can easily manipulate robots without having to master the programming language.
The programming mode can be learned in half an hour and simple programming can be completed in 1 hour.



灵活部署 Flexible deployment

集成设计, 轻便灵活, 占地面积小;
工作站部署新任务设置简单快捷, 效率高;

Integrated design, light and flexible, small footprint area;
Workstation deployment of new task setting is simple, quick and efficient;



应用广泛 Wide Applications

广泛应用于食品、医药、3C、日化、印刷等行业领域。

Widely used in food, pharmaceuticals, 3C, daily chemistry, e-commerce and other industries.



产品参数

型号 Model	WSC-MD40G	WSC-MD40S
负载 Load	40kg	40kg
工作半径 Working radius	1700mm	1700mm
水平距离 (卡板规格) Horizontal distance (Specification of cardboard)		
垂直距离 Vertical distance	固定式H1=1600mm	升降式H2=2100mm
码垛速度 Stacking speed	≤ 6 pcs/min	≤ 6 pcs/min
重复定位精度 Repeated positioning accuracy	±0.04mm	±0.04mm
通讯方式 Communication mode	TCP/IP	TCP/IP
IP等级 Level Ip	Ip54	Ip54
温度范围 Temperature Range	0-55°C	0-55°C
最大功耗 Maximum Power Dissipation	4kw	4.8kw
电箱供电 Power supply from electric box	单相220v / 50HZ	单相220v / 50HZ
整机重量 Whole machine weight	≈360kg	≈420kg
占地面积 Floor area	1505*1716mm	1505*1716mm

码垛工作站拓展配置方案

进一步保障码垛工作站的安全性。

激光雷达传感器

- 无接触、灵活设置检测距离
- 靠近黄色区域报警减速
- 进入红色区域立即停机

光栅传感器

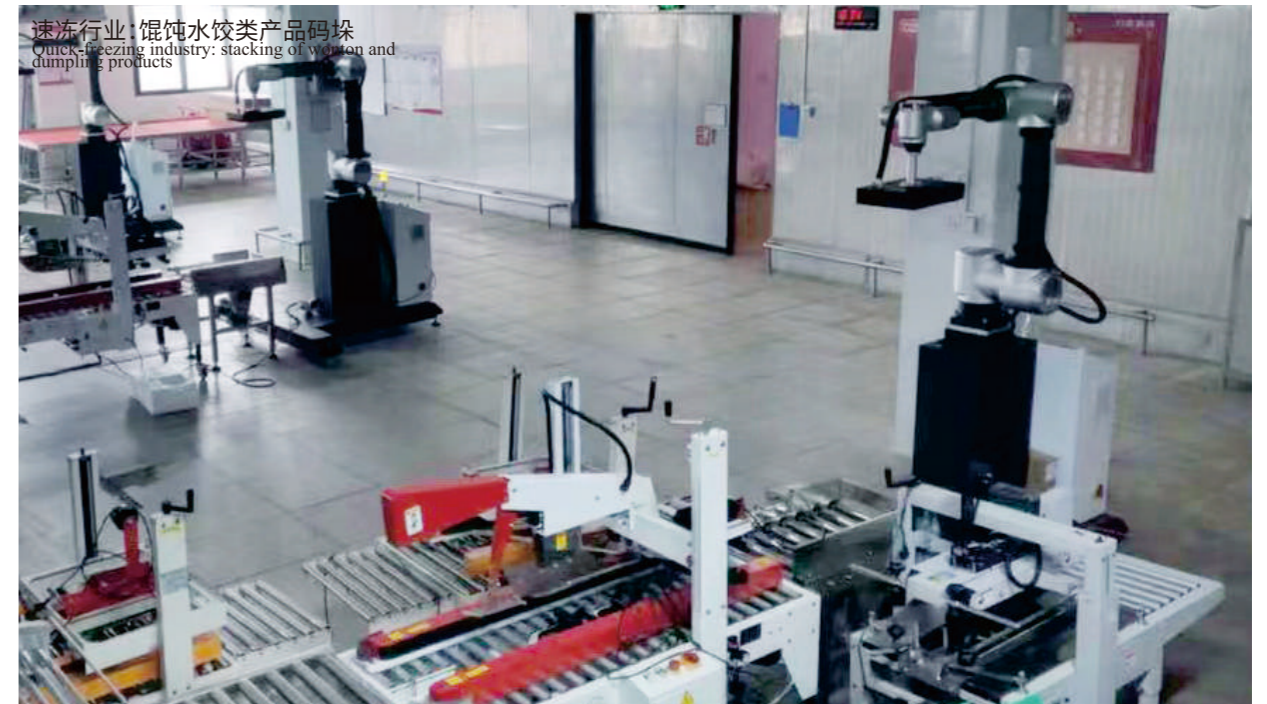
- 性能稳定, 抗干扰能力强
- 感应灵敏度高, 快速反应
- 使用寿命长

安全围栏

- 物理防护, 安全可靠

协作码垛案例展示

Collaborative stacking case presentation



合作伙伴

Cooperating partners



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