

Haier

家用电器静电粉末涂装

Electrostatic Powder Coating for Household Appliances

项目位置：山东青岛

系统标签：SURPASS超越系列

涂装工件：厨房电器板金件



项目简述：该项目旨在提升生产线的自动化水平与涂层质量，同时减少涂料损耗和人工操作需求。客户希望在后续的项目中全面使用国产喷粉系统替代进口设备，并对喷枪系统提出了更高的自动化要求和喷涂质量标准，同时希望通过提升设备性能来降低生产线的涂料损耗，并减少对人工操作的依赖。此外，客户的部分零件具有复杂的几何形状，对喷涂均匀性的要求极高。

The project aims to improve the automation level and coating quality of the production line, while reducing paint loss and the need for manual operation. The customer hopes to fully use domestically produced powder coating systems to replace imported equipment in subsequent projects, and has proposed higher automation requirements and coating quality standards for the spray gun system. At the same time, the customer hopes to reduce paint loss on the production line and reduce reliance on manual operation by improving equipment performance. In addition, some of the customer's parts have complex geometries, with extremely high requirements for coating uniformity.

解决方案：该项目采用了Surpass超越系列GC20NA-C型静电喷枪系统，具备出色的静电喷涂性能，可提供稳定且持续的上粉率，有效减少涂料浪费，并确保涂层均匀。针对客户的高自动化需求，我们还配备了先进的自动化喷涂控制系统，实现了对复杂零件的精准喷涂。



Solution: The project adopts the Surpass series GC20NA-C type electrostatic spray gun system, which has excellent electrostatic spray performance, providing a stable and continuous powder application rate, effectively reducing paint waste, and ensuring even coating. In response to the customer's high automation requirements, we have also equipped with advanced automated spray control systems, achieving precise spraying for complex parts.

项目配置：

控制器型号：Haztek Surpass超越系列

喷枪型号：Haztek GA20（带延长杆）

泵型号：Haztek PPH40

控制系统：Haztek Coatpilot中央控制系统

Controller Model: Haztek Surpass Series

Spray Gun Model: Haztek GA20 (with extension pole)

Pump Model: Haztek PPH40

Control System: Haztek Coatpilot Central Control System

项目成果：

- 1、为客户节约直接采购成本约100万元，粉末喷枪运营费用（耗材及维修）每年由原来的每套1万元/年降至每套0.2万元/年。
- 2、喷涂过程中涂料损耗减少了10%，生产效率提升了25%。
- 3、人工补喷率降低60%，提升涂层品质。

The customer saves approximately 1 million RMB in direct procurement costs. The operating costs for powder spray guns (consumables and maintenance) have decreased from the original 10,000 RMB per set per year to 2,000 RMB per set per year. Additionally, paint wastage during the spraying process has reduced by 10%, and production efficiency has increased by 25%.

Haztek

精益喷涂 成就卓越智造



3+3 六维超越性能

出粉、换色、品质全面超越
安全、智能、耐用全面提升

国际认证

欧盟CE、ATEX防爆认证

全域服务生态

六维售后服务/随时、及时、全周期

打造超越欧美标准的中国喷枪

Creating spray guns in China that surpass European and American standards.

智能化高、拓展性强 更安全的自动/手动喷枪系统

Highly intelligent and expandable

Safer automatic/manual spray gun system

广东汉哲涂装技术有限公司

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SURPASS 超越系列

SURPASS Spray System

更智能高效的产品体验、更高的安全环保标准及更杰出的涂层品质

SURPASS超越系列喷涂系统是一款智能化、规模化的静电粉末喷涂解决方案。它具备强大的大规模部署能力，兼具高效管理和简便操作的特点。通过Coatpilot + GC20NA控制器，可以实现大规模喷枪群控制，简化设备调控流程，有效避免设置失误并显著提升生产效率。同时，它支持多种涂装模式的预设与远程编程，可自动识别工件，一键满足各种涂装需求，展现出卓越的操作便捷性。模块化控制器搭载防爆电柜，在安全性上比肩国际标准，确保工业应用中的高安全性。

超越系列还配备了最先进的静电自适应技术和进气自洁技术，100KV倍压模块可释放强效静电，显著提升粉末带电状态。PCC电控系统实现精准调控，使上粉率达到75%以上，既有效节省耗材，又进一步提升生产效率。此外，其高效稳定的粉末雾化技术确保了卓越的涂装品质，使SURPASS超越系列成为提升生产效率、节约耗材，并创造超预期投资回报的理想选择。

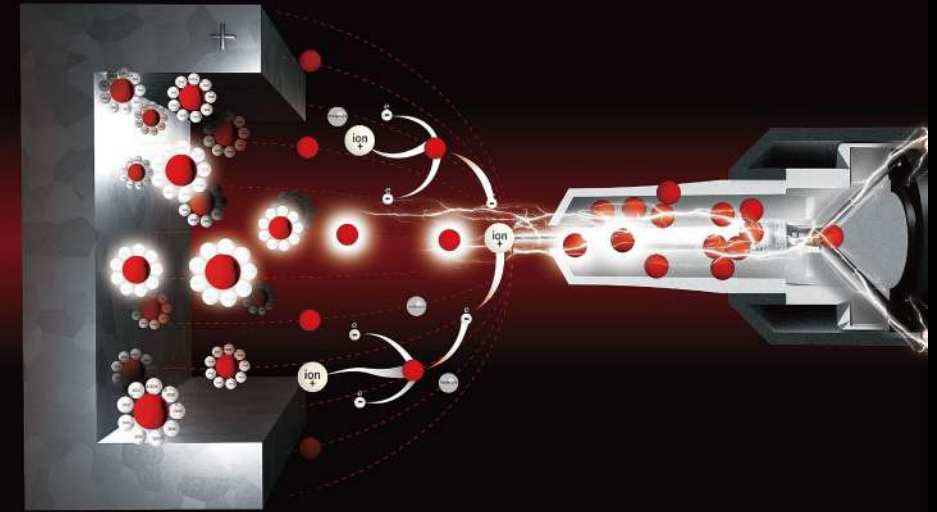
Smarter and more efficient product experience, higher safety and environmental standards and outstanding coating quality

SURPASS Beyond Series Coating System is an intelligent, large-scale electrostatic powder coating system. It has the ability of large-scale deployment, and at the same time, it is characterized by efficient management and easy operation. Coatpilot + GC20NA controller can realize large-scale spray gun group control, simplify the process of equipment regulation and control, avoid setup errors, and improve production efficiency. It supports a variety of coating mode presets and remote programming, automatic workpiece recognition, one-click to meet a variety of coating needs, showing its excellent ease of operation. The modular controller design is equipped with explosion-proof electric cabinet, which is comparable to international standards in safety and ensures high safety performance in industrial applications.

SURPASS series also equipped with the most advanced electrostatic self-adaptive technology and air intake self-cleaning technology, 100KV times the pressure module to release the strong electrostatic, significantly improve the powder charged state, PCC electronic control precision control, to achieve up to more than 75% of the powder on the rate of effective savings in consumables, improve productivity. In addition, efficient and stable powder atomization further guarantees excellent coating quality, making the SURPASS Beyond Series an ideal choice for improving productivity, saving consumables and creating an extraordinary return on investment.



卧式静电涂装解决方案



SURPASS超越系列

融合三大精尖技术 探顶行业上粉率

SURPASS Serie

Integration of Three Leading-Edge Technologies to Achieve the Highest Powder Spraying Efficiency in the Industry

超越 · 静电性能 / 精准充分快充

100kV倍压模块结合电极针自清洁技术，释放强效静电，确保每颗粉末涂料粒子均达到最佳带电状态。上粉率显著提升，即使是复杂的凹槽也能轻松覆盖，大幅减少粉末浪费，为您带来高效的喷涂体验。

超越 · 出粉状态 / 精密均匀出粉

PCT比例阀技术带来精确的气流控制，结合PPH40的柔和高浓度粉末供应和特殊设计的喷嘴，实现更加稳定的粉末输出和优异的雾化效果。这种创新组合显著提升了涂层的均匀性与质量，令涂层流平效果更加出色，为您提供卓越的喷涂表现。

超越 · 设计品质 / 恒稳运行

超越系列喷枪的高性能与高可靠性，得益于汉哲一流的设计水准、严苛的检验标准以及国际一线品牌元器件的卓越品质。正是这种精益求精的完美结合，赋予了喷枪稳定高效的性能保障，助力用户实现卓越的喷涂品质与生产效率。

Transcendence · Electrostatic Performance / Accurate and Sufficient Charging

The 100kV voltage doubling module combined with the electrode needle self-cleaning technology releases strong static electricity to ensure that each powder coating particle is optimally charged. The powder loading rate is significantly increased, even complex grooves can be easily covered, significantly reducing powder waste, bringing you an efficient spraying experience.

Transcendence · Powder Spraying Performance / Precise and Uniform Powder Spraying

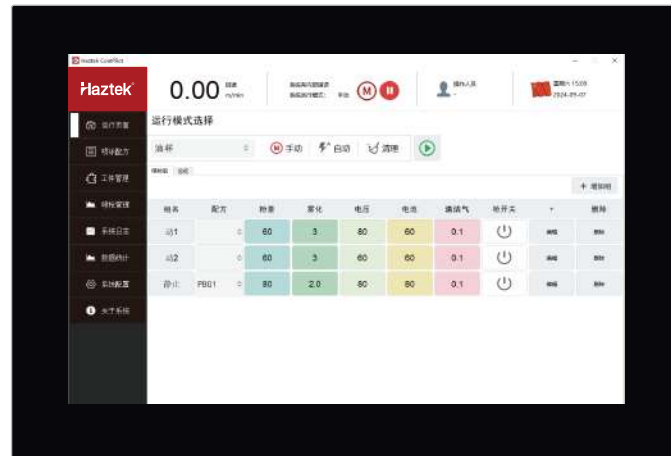
PCT proportional valve technology delivers precise airflow control, combined with the PH40's soft, highly concentrated powder supply and specially designed nozzles for more consistent powder output and superior atomization. This innovative combination significantly improves the uniformity and quality of the coating, resulting in better leveling of the coating, providing you with excellent spraying performance.

Transcendence · Design Quality / Stable Operation

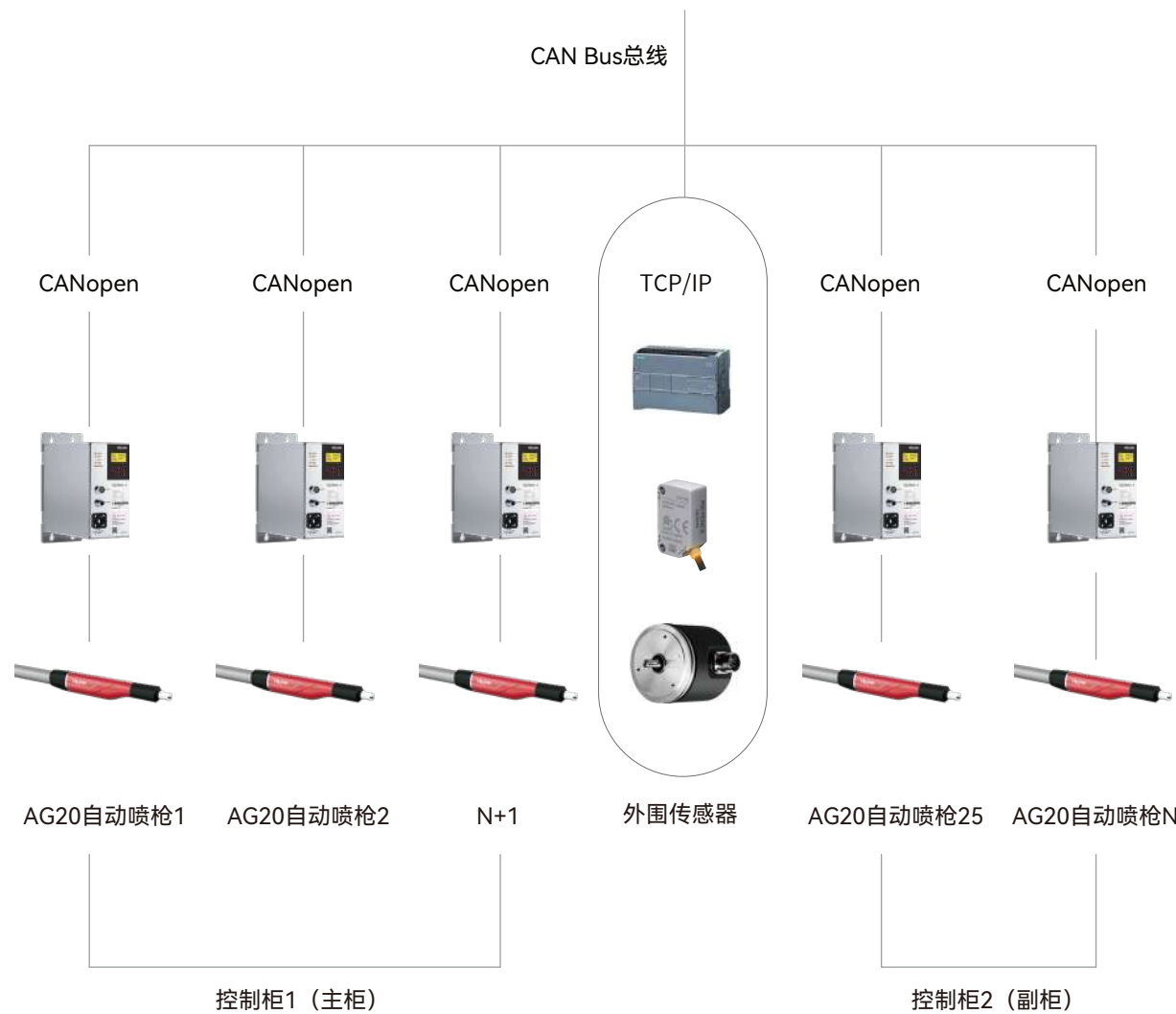
The high performance and reliability of the Beyond series spray guns are attributed to Haztek first-class design standards, stringent inspection criteria, and the excellent quality of first-tier international brand components. It is this perfect combination of continuous improvement that endows the spray guns with stable and efficient performance, helping users achieve excellent coating quality and production efficiency.

更高效便捷的Coatpilot喷涂管理系统

More efficient and convenient Coatpilot spraying system



Coatpilot喷涂管理系统



Coatpilot喷涂管理系统 Coatpilot Coating Management System

更简单地处理复杂流程

全局模块化设计能够在众多的工件种类中快速部署工艺参数，使得转换的效率更高，重复质量更容易。

高效且连续的涂层

通过增加如间隙、高度和深度控制等自动功能激活系统的潜力。对于非常复杂工件的自动化需求，可提供无需编程的动态3D喷涂解决方案。

简单、安全且快速的操作

使用12英寸的多点触控显示屏控制所有的喷涂过程，具有直观的选项、清晰的可视化图标和参数，机器状态一目了然。

兼容第三方API/适配性强

CoatPilot系统兼具开放性，可通过ERP、MES、其他第三方系统的API接口将Coatpilot集成到您的生产环境中，与其他设备及系统构成强大的自动化生产系统。

Simpler handling of complex processes

The global modular management allows for quick deployment of process parameters among numerous types of workpieces, resulting in higher efficiency and easier replication of quality.

Efficient and continuous coating

Activate the system's potential by incorporating automatic functions such as gap, height, and depth control. For the automation needs of highly complex workpieces, dynamic 3D coating solutions are available without programming

Simple, safe, and fast operation

Control all spray coating processes using a 12-inch multi-touch screen with intuitive buttons, clear visual icons and parameters for easy understanding of machine status.

Future-oriented control system

The CoatPilot system is open and can be integrated into your production environment through APIs with ERP, MES, and other third-party systems. This allows for the formation of a powerful automated production system with other equipment and systems.



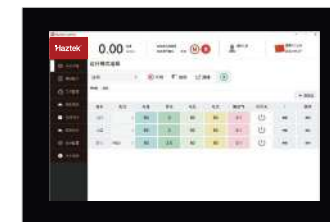
超越系列Surpass GC20NA-C自动喷涂解决方案 Surpass GC20NA -C Automated Coating Solutions

中大型企业大规模部署/全面对标欧美进口品牌

系统配置：Coatpilot喷涂管理系统、GC20NA-C控制器、AG20自动喷枪（可选90、120、135多角度弯头）、PPH40粉泵、

Large-scale deployment of medium and large enterprises/comprehensive benchmarking of imported brands in Europe and the United States

System configuration: Coatpilot spray management system, GC20NA-C controller, AG20 automatic spray gun (optional 90, 120, 135 multi-angle elbows), PPH40 powder pump.



Surpass GC20NA-C静电粉末喷枪控制器 Surpass GC20NA-C Electrostatic Powder Spray Gun Controller

GC20NA-C控制器是专为自动喷涂集成设计的高性能控制器，适用于大规模部署的自动化设备。具有高可靠性、智能化功能和高度集成性，注重安全性，适用于高端自动化领域，能满足复杂需求，是对产品性能和安全性有严格要求的企业的理想选择。

The GC20NA-C controller is a high-performance controller designed for automated coating integration and is suitable for large-scale deployment of automation equipment. With high reliability, intelligent functions and high integration, focusing on safety, it is suitable for high-end automation fields and can meet complex demands, making it an ideal choice for companies with strict requirements on product performance and safety.



ATEXB防爆认证 | CE(EEA)认证

紧凑、模块化设计：GC20NA-C的设计理念是简洁与效率的结合，使其在占地面积小的同时，功能强大。

开放性与集成化：采用标准的CANopen协议，并向所有用户开放Eds文件，为用户提供了更大的二次开发空间和设备互联互通的可能性。

卓越的散热性能：全铝机身不仅坚固耐用，更为重要的是，它提供了出色的散热性能，确保设备在长时间运行下仍能保持稳定。

更低的故障率：设备的稳定性直接关系到生产效率。GC20NA-C在设计和生产过程中都经过了严格的质量控制，确保其故障率远低于行业标准。

安全性：GC20NA-C控制器采用了独特的外形设计，确保其与防爆电柜完美兼容。无论在何种环境下都能为您提供稳定、安全的粉末供应并满足电压控制需求。

Compact and modular design: The design concept of GC20NA-C combines simplicity and efficiency, making it powerful while occupying a small footprint.

Openness and integration: Adopting the standard CANopen protocol and opening the Eds files to all users provides greater space for secondary development and the possibility of interconnection and mutual control between devices.

Excellent heat dissipation performance: The full aluminum body is not only sturdy and durable but also provides excellent heat dissipation performance, ensuring that the equipment remains stable during long-term operation.

Lower failure rate: The stability of the equipment is directly related to production efficiency. The GC20NA-C has undergone strict quality control during design and production, ensuring its failure rate is far below the industry standard.

Safety: The GC20NA-C controller features a unique design that ensures perfect compatibility with explosion-proof electrical cabinets. It can provide stable and safe powder supply and meet voltage control requirements in any environment.

AG20自动喷枪 GunAG20 Automatic Spray Gun

内置100kv高性能倍压块，确保持续输出稳定，从而实现极高的上粉率。电极针内部设计有三次进气技术，让电极针尖保持清洁，有效防止粉末凝结，确保优良的静电释放效果。可选择90°、120°、135°多种不同角度的弯头喷嘴。可适用于大多数常见粉末，包括金属粉末，满足多种涂料需求，满足不同需求。



Built-in 100kv high-performance pressure doubler block ensures stable continuous output, resulting in an extremely high powder loading rate. The electrode needle is internally designed with three times air intake technology to keep the electrode tip clean and effectively prevent powder condensation, ensuring excellent electrostatic discharge. A wide range of elbow nozzles with different angles of 90°, 120° and 135° are available. Can be applied to most common powders, including metal powders, to meet a wide range of coatings to meet different needs.

PPH40粉泵 PPH40 Powder Pump

满足“即插即用”功能，适用于快速换色和快速清理。粉管快插式设计，方便粉管的清洁分离与连接；文丘里管采用优质不粘材质制造，并配有连接压缩空气的快速接头。

Meets the "plug and play" function, suitable for quick color changes and cleaning. Quick plug design for powder hoses to facilitate separation and connection for cleaning. The Venturi tube is made of high-quality non-stick material and comes with a quick connection for compressed air.

可从粉桶拆卸
带快拆式接头的单向阀
经久耐用的文丘里管
供粉稳定
雾化效果佳
粉末最大输出为520g/min

Easy disassembly from the powder barrel
With quick-disconnect one-way valve
Durable Venturi tube
Stable powder supply
Excellent atomization effect
Maximum powder output of 520g/min



超越系列Surpass GC20自动喷涂解决方案 Surpass GC20NA Automated Coating Solutions

中大型企业常规部署/全面对标欧美进口品牌

系统配置: Coatpilot喷涂管理系统、GC20A控制器、AG20自动喷枪(可选90°、120°、135°多角度弯头)、PPH40粉泵、

Routine deployment of medium and large enterprises/comprehensive benchmarking of imported brands in Europe and the United States

System configuration: Coatpilot spraying management system, GC20 controller, AG20 automatic spray gun (optional 90, 120, 135 multi-angle elbow), PH40 powder pump,



GC20A自动喷枪控制器 GC20A Automatic Spray Gun Controller

搭载数字阀门与PCC精准电流控制技术, 确保喷涂过程中的流量和压力稳定, 同时可以提供10μA以下的精准电流调节, 确保粉末不会过度充电, 提高喷涂效果的稳定性与喷涂质量。GC20A控制器支持最大20个可编程喷涂程序, 每组参数都可自动保存, 方便下次调用。此外, GC20A配备可旋转的CANOpen通讯模块, 并提供Eds文件, 为二次开发和设备互联带来无限可能。具备内置自我诊断和一键清理功能, 可自动检测运行状态, 及时发现并提示问题。一键清理简化喷枪的清洁和维护, 提高换色效率。



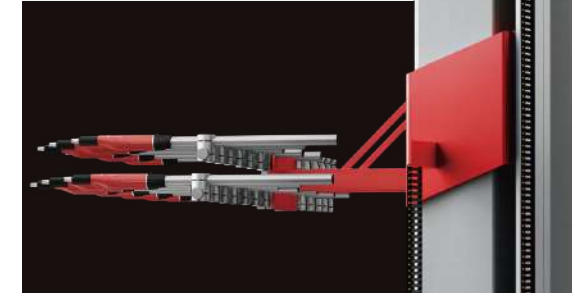
Equipped with digital valves and PCC precision current control technology, it ensures stable flow and pressure during the spraying process, and at the same time, it can provide precise current regulation under 10μA to ensure that the powder will not be over-charged, and to improve the stability of the spraying effect and the quality of the spraying. the GC20A controller supports a maximum of 20 programmable spraying programs, and each set of parameters can be automatically saved for next time recall. In addition, the GC20A is equipped with a rotatable CANOpen communication module and provides Eds files, which brings unlimited possibilities for secondary development and equipment interconnection. Equipped with built-in self-diagnostic and one-key cleanup functions, it can automatically detect the operation status, and promptly find and prompt problems. One-touch cleanup simplifies gun cleaning and maintenance and improves color change efficiency.



AG20自动喷枪 GunAG20 Automatic Spray Gun

内置100kv高性能倍压块, 确保持续输出稳定, 从而实现极高的上粉率。电极针内部设计有三次进气技术, 让电极针尖保持清洁, 有效防止粉末凝结, 确保优良的静电释放效果。可选择90°、120°、135°多种不同角度的弯头喷嘴。可适用于大多数常见粉末, 包括金属粉末, 满足多种涂料需求, 满足不同需求。

Built-in 100kv high-performance pressure doubler block ensures stable continuous output, resulting in an extremely high powder loading rate. The electrode needle is internally designed with three times air intake technology to keep the electrode tip clean and effectively prevent powder condensation, ensuring excellent electrostatic discharge. A wide range of elbow nozzles with different angles of 90°, 120° and 135° are available. Can be applied to most common powders, including metal powders, to meet a wide range of coatings to meet different needs.



PPH40粉泵 PPH40 Powder Pump

满足“即插即用”功能, 适用于快速换色和快速清理。粉管快插式设计, 方便粉管的清洁分离与连接; 文丘里管采用优质不粘材质制造, 并配有连接压缩空气的快速接头。

Meets the "plug and play" function, suitable for quick color changes and cleaning. Quick plug design for powder hoses to facilitate separation and connection for cleaning. The Venturi tube is made of high-quality non-stick material and comes with a quick connection for compressed air.

可从粉桶拆卸
带快拆式接头的单向阀
经久耐用的文丘里管

Easy disassembly from the powder barrel
With quick-disconnect one-way valve
Durable Venturi tube

供粉稳定
雾化效果佳
粉末最大输出为520g/min

Stable powder supply
Excellent atomization effect
Maximum powder output of 520g/min



超越系列Surpass GC20M手动喷涂解决方案 Surpass GC20-F Manual Coating Solution



系统配置：GC20M手动喷枪控制器、MG20手动喷枪、PPH40粉泵、

System configuration: GC20M manual spray gun controller, MG20 manual spray gun, PPH40 powder pump.

GC20M手动喷枪控制器 GC20M manual spray gun controller

GC20M控制器支持最多20个可编程喷涂程序。通过喷涂系统的精密电流调节、数字阀门技术、PCC精准电流控制、可编程喷涂程序、自我诊断功能、开放性与集成化设计，以及一键清理功能，确保了喷涂效果的稳定性和喷涂质量的提升，同时简化了操作流程，提高了设备维护和换色效率，为手动喷涂应用提供了高效可靠的解决方案。

The GC20M controller supports up to 20 programmable spray coating programs. Through the system's precise current adjustment, digital valve technology, PCC precise current control, programmable spray programs, self-diagnosis function, openness and integration design, and one-touch cleaning function, the stability of the spraying effect and the improvement of coating quality are ensured. At the same time, it simplifies the operation process, improves equipment maintenance and color change efficiency, providing an efficient and reliable solution for manual spraying applications.



Gun MG20手动喷枪 Gun MG20 Manual Spray Gun

MG20具备出色的人体工程学设计，喷枪重量仅为510克，轻量化的同时仍保有超强的耐用性。其独特的仰角和手柄设计，使得长时间操作也不会感到疲劳。配备外置远程触摸控制模块，轻松调节喷涂参数。双击扳机，即可快速切换到预设的喷涂程序，显著提高工作效率。

内置的100kV高效倍压块确保了持续稳定的输出，达到卓越的上粉效果。且适用于绝大多数常见粉末，甚至对于那些难以充电的粉末涂料，它也能实现高效涂覆。此外，抗磨损的设计和优质材料进一步降低了维护成本。

The MG20 has an excellent ergonomic design and weighs only 510 grams, making it lightweight while still retaining superior durability. Its unique elevation angle and handle design allow for long hours of operation without fatigue. An external remote touch control module makes adjusting spraying parameters a breeze. A double-click on the trigger quickly switches to a preset spraying program, greatly improving work efficiency.

The built-in 100kV high-efficiency pressure doubler ensures a constant and stable output for excellent powder coating results. It is suitable for most of the common powders, even for those difficult to charge powder coatings, it can also realize efficient coating. In addition, its wear-resistant design and preferred materials further reduce maintenance costs.



可搭载三种不同载具，满足不同应用场景

手动喷涂设备以其卓越的灵活性和适应性，在不同的应用场景中展现出独特的优势。移动型台车以其卓越的移动性脱颖而出，搭配220升的粉桶，使得大型工件的喷涂工作变得轻松便捷。实验型设备则搭配小型粉桶，以其小巧灵活的特性，适应多变的实验室环境和小型工件的喷涂需求。挂壁型的设计则考虑了空间利用，安装简便且节省空间，适合空间有限的工作场所。这些多样化的载具选择，确保了汉哲手动喷涂设备能够满足各种场景的需求，无论是在工业生产、实验室测试还是空间受限的环境中，都能提供高效、稳定的喷涂解决方案。

Three different carriers can be carried to meet different application scenarios

Manual spraying equipment demonstrates unique advantages in different application scenarios, thanks to its exceptional flexibility and adaptability. The mobile cart stands out for its excellent mobility, paired with a 220-liter powder container, making the spraying of large workpieces easy and convenient. The experimental model, equipped with a small powder container, adapts to the changing environment of laboratories and the spraying needs of small workpieces, with its compact and flexible design. The wall-mounted model considers space utilization, with easy installation and space-saving features, making it suitable for workplaces with limited space. These diverse carrier options ensure that Haztek manual spraying equipment can meet the needs of various scenarios, whether in industrial production, laboratory testing, or space-constrained environments, providing efficient and stable spraying solutions.



移动型台车SURPASS-F



实验型SURPASS-FS



挂壁式SURPASS-SE

领先的静电粉末喷枪系统 专案定制服务商

Leading electrostatic powder spray gun system
Specialized customization service provider

