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楚天华通医药设备有限公司

TRUKING WATERTOWN PHARMACEUTICAL EQUIPMENT CO.,LTD.

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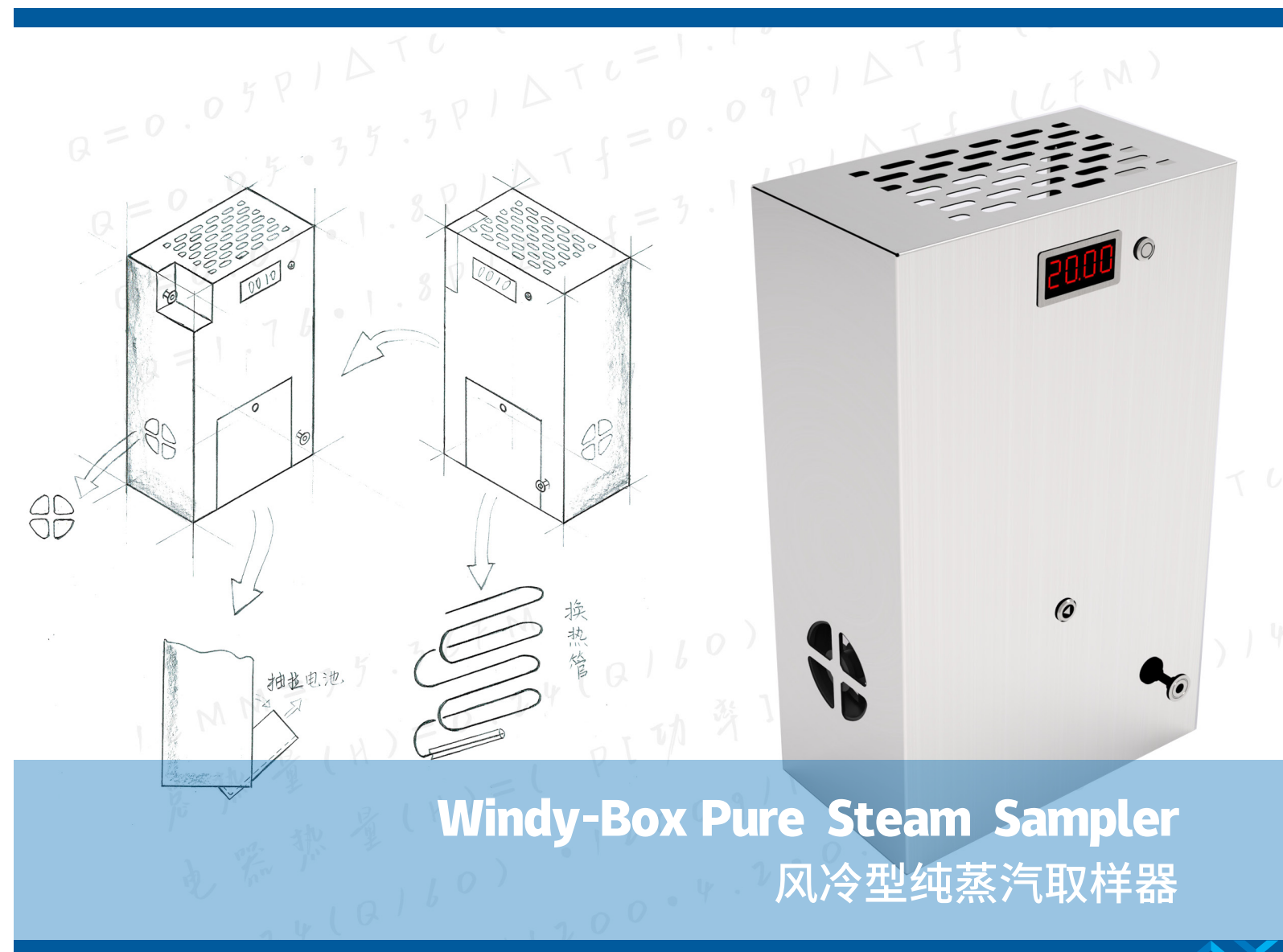
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楚天华通医药设备有限公司

TRUKING WATERTOWN PHARMACEUTICAL EQUIPMENT CO.,LTD.

让世界制药工业插上智慧的翅膀
Equip global pharmaceutical manufacturing industry with intelligent wings.

TRUKING

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楚天华通医药设备有限公司系楚天科技股份有限公司全资子公司，始建于1993年，是目前亚洲领军制药用水系统（制备、储存和分配）、配液系统、不锈钢压力容器、污水处理、蒸发浓缩结晶、换热器研发制造基地，装备及制造工艺处于行业优级水平，员工总数1300余人，资产总额20亿元，服务于全球1000余家制药企业。

公司位于长春九台经济开发区，是中国制药装备行业协会理事单位，中国医药设备工程协会、中国膜工业协会会员单位，获评定为国家级高新技术企业、吉林省专精特新企业、吉林省级企业技术中心，获得省级创新型科技企业、长春市百强民营企业、长春市科技型小巨人企业等荣誉。公司拥有中国特种设备压力容器D级（10MPa以下的一类、二类、三类压力容器）设计与制造资质、压力管道（GC2）安装许可证、建筑机电安装工程专业承包贰级资质、环保工程专业承包贰级、环境工程设计专项（水污染防治工程）乙级、美国ASME（U）钢印设计与制造资质、欧盟CE（PED、MD）认证资质。截至2023年4月，公司共提出中国专利申请320项，有效专利180项，另提出1件PCT国际专利申请。产品已出口美国、意大利、比利时、希腊、土耳其、俄罗斯、韩国、泰国、越南、印尼、印度、埃及、沙特、摩洛哥、秘鲁等30多个国家和地区，国际市场占有率正逐年快速提升。

公司拥有经验丰富的研发技术团队，覆盖工程设计、项目管理、测试调试、验证与咨询服务，联合楚天科技、德国ROMACO集团、四川省医药设计院共同承接制药企业EPCM总包服务，为制药企业提供工程工艺优化、产品的全生命周期管理与服务。

2021年公司确认新建楚天华通医药装备智能制造产业园项目，位于长春市九台经济技术开发区中古医药产业园。项目新购地36.1117万平方米，计划在5年内分三期完成项目整体建设任务，项目建成后，将崛起楚天华通研发中心大楼、智能车间、员工公寓以及商务接待中心等现代化智能配套公用工程。一期工程建筑面积6万平米，预计2023年7月投产。作为楚天华通年产5000台套医药装备的智能制造基地，楚天华通医药装备智能制造产业园项目完成后将大幅提升企业产能，将进一步推动企业战略目标的实现。

公司坚持“做受尊敬的人、造受尊敬的产品、办受尊敬的企业”的核心价值观，秉承“要么唯一，要么第一”的理念，弘扬“因为执着，所以卓越”的精神，将楚天华通打造成全球制药用水系统领军企业之一。

Truking Watertown Pharmaceutical Equipment Co., LTD., a wholly-owned subsidiary of Truking Technology Limited, was founded in 1993. It is the leading R&D and manufacturing base of pharmaceutical water system (preparation, storage and distribution), liquid preparation system, stainless steel pressure vessel, sewage treatment, evaporation, crystallization and heat exchanger in Asia. With more than 1300 employees and 2 billion yuan of assets, the company serves more than 1000 pharmaceutical enterprises around the world.

Truking Watertown is located in Jiutai Economic Development Zone, Changchun. It is a member of China Pharmaceutical Equipment Industry Association, China Pharmaceutical Equipment Engineering Association and China Membrane Industry Association. It has been rated as a national high-tech enterprise, Provincial Specialized and Sophisticated Enterprise, Provincial Enterprise Technology Center. It has been honored as provincial innovative technology Enterprise, Changchun Top 100 Private Enterprise, and Changchun Small Giant Technology Enterprise. Truking Watertown has Chinese special equipment Class D (Class I, Class II and Class III below 10MPa) pressure vessel design and manufacturing license, Pressure pipeline (GC2) installation license, construction mechanical and electrical installation engineering contracting Class II, environmental engineering contracting Class II, environmental engineering design special (water pollution control engineering) Class B, ASME(U) steel seal design and design manufacturing qualification, EU CE(PED, MD) certification qualification. Truking Watertown has applied for 320 patents, 180 patents of which have been authorized until April 2023, and one PCT international patent application. Products have been exported to the United States, Italy, Belgium, Greece, Turkey, Russia, South Korea, Thailand, Vietnam, Indonesia, India, Egypt, Saudi Arabia, Morocco, Peru and other 30 countries and regions, the international market share is rapidly increasing year by year.

Truking Watertown has an experienced R&D technical team, covering engineering design, project management, testing and commissioning, validation and consulting services. Together with Truking Technology, Germany ROMACO Group and Sichuan Pharmaceutical Design Institute, the company jointly undertakes EPCM general contract services for pharmaceutical enterprises, providing engineering process optimization and product lifecycle management and services for pharmaceutical enterprises.

In 2021, Truking Watertown pharmaceutical equipment Intelligent Manufacturing Industrial Park project started, located in Jiutai Economic and Technological Development Zone of Changchun Medicine Industrial Park. The new plant occupies 361,117 square meters. It is planned to complete the overall construction in three phases within 5 years. After the completion of the construction, Truking Watertown R&D Center building, intelligent workshop, employee apartment and business reception center and other modern intelligent supporting utilities will be used. The first phase of the project covers a construction area of 60,000 square meters and is expected to be put into operation in July 2023. As base of Truking Watertown with an annual output of 5,000 sets, pharmaceutical equipment intelligent manufacturing Industrial Park will greatly improve the enterprise's production capacity after the completion of the project, which will further promote the realization of the strategic objectives of the enterprise.

We insist on the core value of being respected person, making respected product and running respected enterprise and adhere to the philosophy to be the unique or to be the first and promote the spirit of Because of persistence, we are superexcellent to make Truking Watertown be one of the leading pharmaceutical water system enterprises all over the world.

风冷型纯蒸汽取样器 Windy-Box

技术参数 / Technical Parameters

- ◎ 取样效率：约 150ml/min
 - ◎ 续航时间：约 5h
 - ◎ 整机重量：20.2kg
 - ◎ 专利号：CN202122583152.7
- Capacity: about 150ml/min
 - Endurance: about 5h
 - Weight: 20.2kg
 - Patent Number: CN202122583152.7



技术领域 / Technical Field

- ◎ 本实用新型涉及医药行业纯蒸汽发生器设备的取样和药厂洁净区纯蒸汽使用点的取样。
- The model relates to the sampling of pure steam generator in the pharmaceutical industry and the sampling of pure steam POU in the clean area of pharmaceutical factory.

应用背景 / Application Background

- ◎ 在医药行业中，大多数的药品和接触药品的设备都需要纯蒸汽的消毒和灭菌。合格的纯蒸汽需要取样化验分析其内毒素等微生物指标，样品是液态的蒸汽冷凝水状态下，才容易化验分析。
- ◎ 本设备为一种新型便携式风冷无菌纯蒸汽取样器，用以替代常规的水冷纯蒸汽取样车。从冷媒的使用上，采用空气作为冷却介质，减少了原有的储存水罐，供水泵等设备部件，因此大大减小了此取样设备的占用空间、重量、维护程度。可操作性，便捷性，机动性有显著提高。
- In the pharmaceutical industry, most medicine and device contact to medicine require pure steam sanitization and sterilization. Qualified pure steam needs to be sampled and analyzed for endotoxin and other microbial indicators, and the sample is in the state of liquid steam condensate, which is easy to test and analyze.
- This device is a new type of portable windy sterile pure steam sampler, which can replace the conventional water-cooled pure steam sampler. From the use of refrigerant, air is used as the cooling medium, storage tank, water supply pump and other device parts are not required, so the sampling device occupation space, weight, maintenance degree is greatly reduced. Operability, convenience and maneuverability have been significantly improved.

设备详解 Device Description



设备整体尺寸 (长宽高尺寸标注)
Overall size of device (length, width, height)

- ◎ 设备自身可实现自排净，支持自身的消毒和灭菌的要求。同时采用卫生级不锈钢管道，卫生级别的结构设计以及管道走向，用于减少对洁净纯蒸汽的污染，控制内毒素等微生物指标。设备外表面也进行了特殊处理，抑制外表面的细菌滋生。
- The device itself can realize self-cleaning, support its own sanitization and sterilization requirements. At the same time using sanitary stainless steel pipeline, sanitary structural design and pipeline direction, used to reduce the pollution of clean pure steam, control endotoxin and other microbial indicators. The outer surface of the device is also specially treated to inhibit the growth of bacteria on the outer surface.

高容量锂离子电池系统 / High capacity lithium ion battery system

- ◎ 带有电路过冲保护、过放保护、温度保护。以此来保证设备在使用时的安全。同时共容量的电池可以保证设备的使用时长，正常使用情况下，可连续使用 5 小时。
- High capacity lithium ion battery system: with passing protection, over-discharge protection, temperature protection. To ensure the safety of the device in use. At the same time, the battery of the same capacity can ensure the service time of the device. Under normal use, the device can be used for 5 hours.



循环风道系统 / Circulating wind system

- ◎ 高流量冷却风机提供空气流动的动力，提供高性能散热翅片提供冷与热的换热需求。同时在设备内组成风道进行循环，使装置内的冷热空气交换更加迅速，提高换热效率。
- High flow cooling fan provides the power of air flow, and high performance cooling fins provide the heat exchange demand of cold and heat. At the same time, the wind formed in the device for circulation, so that the cold and hot air exchange in the device is more rapid and the heat exchange efficiency is improved.



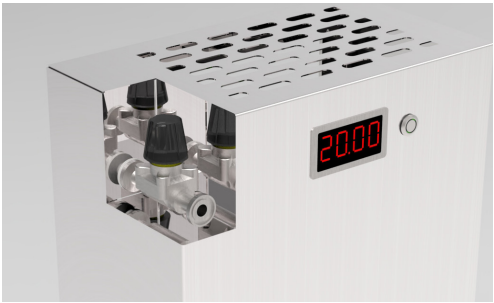
快卡接口 / Quick clamp connection

- ◎ 常用形快卡接口，满足常规压力下纯蒸汽出口与设备进口的使用。
- common shape, meet the use of pure steam outlet and device inlet under conventional pressure.



进液口保护盖 / Liquid inlet protection cover

- ◎ 自带有磁吸装置，可以快速开合，关闭时可以保护设备放置时，其余杂质不会进入设备换热管内部，保证设备换热管内部平时的洁净。
- equipped with magnetic suction device, which can be quickly opened and closed. When closed, it can protect the device from other impurities entering the heat exchange tube of the device when the device is not working, so as to ensure the usual cleanliness inside the heat exchange tube of the device.



脚轮及拉杆 / Casters and pull rods

- ◎ 箱体设置便携小万向轮及拉杆，可实现快速移动，转移设备时更加方便。
- The box body is equipped with portable wheels and pull rods, which can realize rapid movement and make it more convenient to transfer device.

质量控制 Quality Control

·表面处理 Surface Finish

表面粗糙度属于微观几何形状误差，表面粗糙度越小，则表面越光滑，楚天华通拥有国内行业最大的厂内不锈钢电解车间，电解抛光可有效去除不锈钢表面加工毛刺及游离铁离子，降低表面粗糙度，降低结垢及红锈滋生风险，延长设备使用寿命。

- Micro geometric surface roughness shape error, the smaller the roughness, the surface is smooth, Truking Watertown has domestic industry's largest factory of stainless steel electrolytic workshop, electrolytic polishing can effectively remove the stainless steel surface machining burrs and free iron ions, reduce the surface roughness, reduce the risk of scaling and red rust breeding, prolong the service life of device.



·加工制造 Processing and Manufacturing

设备齐全的机加工车间，取样器换热部分主要部件均为华通自行加工制造，过程质量及过程文件可控、可追溯。其余主要部件均采用国内外知名品牌，各部件合格证书。

- The well-equipped machining workshop and the organic parts of heat exchanger are all manufactured by Watertown. The process quality and process documents are controllable and traceable.
- The other main components are domestic and global famous brands, each component qualification certificate.



质量文件 Quality Documents

提供标准符合 GMP 要求的过程文件、验证文件，有效保证产品验证文件真实、可追溯、合规性。

- Provide process documents and verification documents in accordance with GMP requirements to effectively ensure the authenticity, traceability and compliance of product verification documents.

- | | |
|-------------------|--|
| ◎ 取样器维护手册 | • Sampler Maintenance manual; |
| ◎ 使用金属材料的材质证明； | • Material proof of metal materials used; |
| ◎ 过程质量体系文件； | • Process quality system documents; |
| ◎ 酸洗钝化报告及粗糙度证明； | • Pickling passivation report and roughness proof; |
| ◎ 过流部件及密封材质合规性证明； | • Certificate of compliance of overcurrent components and sealing materials; |

售后服务 After-sales Service

选择了楚天华通就等于选择了以下优先权：

- Choosing Truking Watertown means choosing the following priorities:

- ◎ 高效的交货周期，相同产品储备充足；
- ◎ 高质量的产品及符合法规要求的验证体系文件；
- ◎ 源于对产品的自信及口碑，提供两年质量保障；
- ◎ 免费提供两年的易损备件，保证产品生命周期稳定运行；
- ◎ 拥有全国七大区域服务中心，全天候 24 小时的尊享服务；

- Efficient delivery cycle, sufficient stock of the same products;
- High quality products and validation system documents compliance with regulatory requirements;
- From the confidence and reputation of the product, to provide two years' warranty;
- Free provision of two years of vulnerable spare parts, to ensure stable operation of product life cycle;
- With seven national regional service centers, 24 hours a day service;

服务理念

0431-81989135



秉承“一切为客户着想，为一切客户着想，为客户着想一切”的理念，以“为客户创造价值”为己任，楚天专注于打造一流的研发、设计、销售、制造、服务团队及服务管理体系，为客户提供高效、优质的产品与服务。



项目规划支持

楚天拥有系列专业医药设计院、产品研究院，一批行业资深科研技术人员，无菌制药工艺的验证专家、教授等，为客户的项目提供科学、有效的技术规划支持。



过程保障服务

楚天推出的医药装备整体解决方案，实现药品生产过程的全自动化、无菌化，智能检测、分选，以及计算机验证保障，生产出让市场“放心”的产品。



走进园区服务

楚天作为设备供应商，不仅仅将行业法规标准融入到产品设计、制造中，还让法规标准以讲座、交流的形式走进园区，与药企的工艺、生产形成互动与融合。



设备管理咨询服务

楚天致力于满足客户效益最大化需求，提供一揽子的设备管理模式，协同药厂实现投入最小化，产出最大化。

坚持“以客户为中心”，以匠人之心打造极致服务体验，为客户创造更多价值

34 全国 34 个省（市）

365 全年 365 天

7x24 7x24 小时服务时间

我们随时待命为客户单位设备正常运行保驾护航

- + 现场安装、调试、验收
- + 设备工艺、操作、维护等相关培训
- + 周期性的定期上门维护与回访
- + 设备各部件性能的检测与保养
- + 备品备件的及时供应
- + 产品技术升级与技术二次开发
- + 设备大修

Service Concept

0431-81989135



Adhering to concept of “all for customers, for all customers” , and with the mission of “creating value for customers” , TRUKING focuses on building first-class R&D, design, sales, manufacturing, service teams and service management system to offer high-efficient and high-quality products and services for the customers.



Project Planning Support

TRUKING has a series of professional medical and pharmaceutical design institutes, product research institutes, a group of senior scientific research and technical personnel, aseptic pharmaceutical process verification experts, professors, etc., to provide scientific and effective technical planning support for customers' projects.

Process Assurance Service

TRUKING launched the overall solution for medical & pharmaceutical equipment realizing the full automation and aseptic production process, intelligent detection and sorting of the drug, as well as computer verification assurance so as to produce assured products for market.

Service In The Park

As an equipment supplier, TRUKING not only integrates industrial regulations and standards into product design and manufacturing, but also introduces the industrial regulations and standards into Truking industrial park in the form of lectures and exchanges to interact and integrate with the technology and production of pharmaceutical enterprises.

Equipment Management Consultation Service

TRUKING aims to satisfy the maximum benefited demands of the customer and to provide a package of equipment management services to realize minimization investment and maximization production output together with pharmaceutical factories.

Adhere to the philosophy of "customer-centric", TRUKING creates the extraordinary service experience with the spirit of the craftsman, to create more value for customers.

We are always ready to escort the normal operation of the customer's equipment.

- + Onsite equipment installation, commissioning, acceptance
- + Training for equipment process, operation and maintenance
- + Periodic door-to-door maintenance and return visit
- + Performance test and maintenance for machinery parts
- + Timely supply of spare parts
- + Product technology upgrading and secondary development
- + Equipment overhaul