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陶瓷干燥解决方案

INDUSTRIAL DRYING SOLUTIONS
FOR CERAMICS

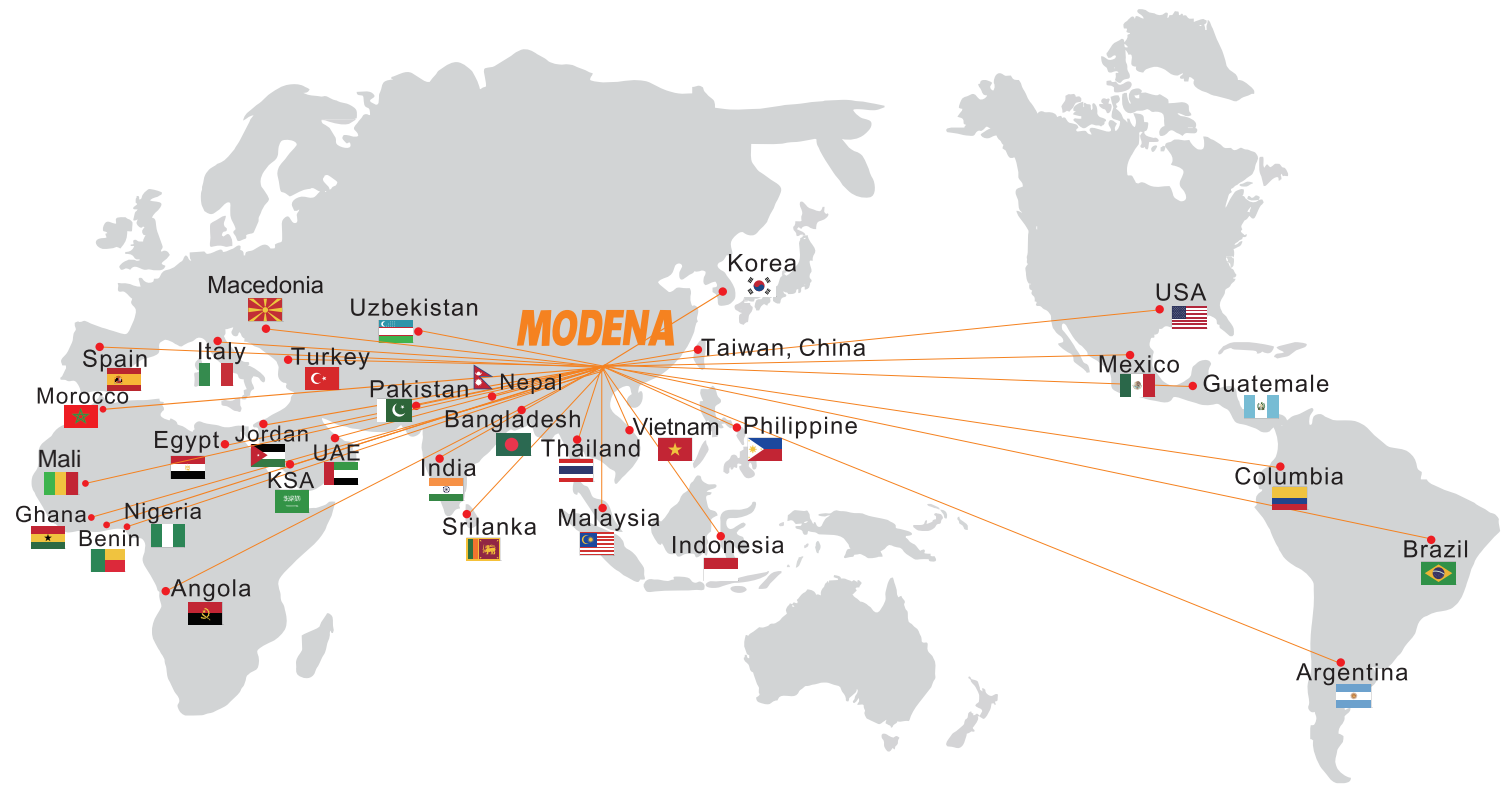
国家高新技术企业
欧盟CE安全认证
中国窑炉协会理事长单位
National High-Tech Enterprise
CE Safety Certificate of European Union
Presidential Unit of China Kiln Association



广东摩德娜科技股份有限公司
MODENA TECHNOLOGY LIMITED

来自世界各地的肯定

APPROVAL FROM ALL
OVER THE WORLD



炉火纯青 Mastered Fire Engineered Excellence

自成立以来，摩德娜已为海内外市场客户提供了过千条陶瓷生产线，均得到了客户的认可。数字还在继续增加中.....

More than 1,000 production lines have been successfully supplied by Modena in both domestic and overseas market and approved by the customers. And the counting still goes on



2003	2008	2010	2011	2012	2015	2017	2018	2020	2021	2022	2023	2024
佛山市摩德娜机械有限公司（广东摩德娜科技股份有限公司前身）注册成立。	3000平方米的新办公大楼投入使用。	佛山市摩德娜机械有限公司通过CE认证，同年获评定为“广东省高新技术企业”。	摩德娜全资子公司新兴县摩德娜机械有限公司（占地150亩）在广东省云浮市新兴县新城工业园奠基。	摩德娜MFS-305型大规模抛光砖用高效节能宽体窑炉获国家科学技术部评定为“国家重点新产品”。	摩德娜自主研发辊道窑新型节能系统RCH获得国家技术专利（ZL201510927025.0）。	摩德娜成功研发并推出新型电子空燃比（ADC）系统并获得国家专利（ZL201711461351.2）。极大程度地赋予辊道窑以更大的生产弹性和更高层次的自动化水平，并在能耗上达到了390kal/kg（瓷质砖），为国际先进水平。	亚洲首条双层大规格岩板窑炉生产线在印度LIOLI工厂一次性投产成功，整线热工设备由摩德娜提供。	在中国岩板爆发的元年，摩德娜得到多家国内陶瓷头部企业（蒙娜丽莎，东鹏和金牌等）的青睐，供应多条INFINITY系列双层岩板窑炉和多层干燥器。截止2020年9月，亚洲区域的所有双层岩板窑炉（超过9条）均为摩德娜制造。	在后疫情时代，摩德娜整体营业收入创下历史记录。在出口市场尤为突出，3352个货柜的年度出货量冠绝行业，覆盖全球各大陶瓷产区，且以“全窑型”的全面数据回答了新时代的问卷。	摩德娜与霍尼韦尔达成氢能应用战略合作，共同开发陶瓷行业低碳燃烧技术。此举不仅响应国家“双碳”目标，更推动窑炉清洁能源结构的革命性突破，为全球陶瓷产业低碳发展提供了创新解决方案。	摩德娜与新玻尔合作的10万m ² /天超大产量中板窑炉生产线成功实现规模化量产，通过创新的生产架构和优化的热工系统，提供了更高效、更稳定的生产解决方案，创下全球窑炉单线产能新纪录！	摩德娜与赣锋锂业合作的碳酸锂项目成功启动，通过独特的连续煅烧方式实现矿物中锂元素的释放与转化，展现了摩德娜技术的跨界应用，标志着摩德娜向多元化热工装备服务商的转型迈出关键一步。
Foshan City Modena Machinery Co.,Ltd.(predecessor of Modena Technology Ltd.) was established.	New office building of 3,000 m2 put into operation.	Modena qualified for CE certification and ranked as "Provincial new hi-tech enterprise".	Wholly-owned subsidiary of Modena, Xinxing Modena Machinery Limited, laid its foundation in Xincheng Industrial Park in Xinxing Town, Yunfu City, Guang-dong Province, covers 100,000sqm area.	Modena's MFS-305 high-efficiency wide-body kiln for polished tiles was awarded as "National Key and New Product" by the Ministry of Science and Technology.	Modena's self-developed new type of energy-saving system RCH obtained National Patent (No. ZL201510927025.0).	Modena researched and developed its all-new Air/Gas Smart Control system (ADC) and obtained National Patent (No. ZL201711461351.2). The ADC system empowers the roller kiln with more productivity and higher level of automation, gas consumption reaches 390kcal/kg (for vitrified products) which is at the international leading level.	The very first Double-decker kiln for large-format sintered slab production line in Asia, supplied by Modena to LIOLI, was put into production successfully.	The year of 2020 is the year of Sintered Slab in China, Modena's INFINITY series thermal equipment (the Double-decker kilns and multilayer dryers) enjoyed the most popularity from the top brands (Monalisa, Dongpeng, Goldmedal etc.). Till September 2020, all the Double-decker kilns for sintered slab in Asia are provided by Modena (more than 9 lines).	In the post epidemic era, Modena set a historical record of annual turnover. It is particularly prominent in the overseas market. The annual shipment of 3,352 containers is the largest in the industry, covering all major ceramic zones in the world, and has answered the questionnaire of the new era with the a Full Slam of kiln models.	Modena and Honeywell established a strategic partnership in hydrogen energy applications to jointly develop low-carbon combustion technologies for the ceramic industry. This initiative not only aligns with China's "Dual Carbon" goals but also drives a revolutionary breakthrough in the clean energy structure of kilns, providing innovative solutions for the global ceramic industry's low-carbon development.	Modena and XinBoer successfully achieved mass production with their groundbreaking 100,000 m ² /day porcelain tile kiln production line. Featuring an innovative production architecture and optimized thermal system, this project delivers unprecedented efficiency and production stability, setting a new world record for single-line kiln capacity in the ceramic industry.	Modena and Ganfeng Lithium successfully launched their lithium carbonate project. The innovative continuous calcination technology enables efficient lithium extraction and conversion, demonstrating Modena's cross-industry technological capabilities. This milestone marks a crucial step in Modena's transformation into a diversified thermal equipment solutions provider.

公司简介

COMPANY PROFILE



广东摩登娜科技股份有限公司（原佛山市摩登娜机械有限公司，以下简称“公司”）成立于2003年，是一家专业从事陶瓷机械设备研发、生产、销售和售后服务的高新技术企业。摩登娜是中国领先的陶瓷生产整厂设备供应商，以干燥和烧成设备为核心，同时配套施釉输送设备，带动整线成套陶瓷生产装备出口。产品除了销往全国中高端市场外，还远销印度、越南、美国、泰国、韩国、台湾地区、印尼、马来西亚、孟加拉国、巴基斯坦、土耳其、沙特阿拉伯、尼泊尔、约旦、加纳、阿联酋、埃及、墨西哥、哥伦比亚等国家和地区；为中国陶瓷机械，尤其是烧成设备在国际市场上赢得了良好的品牌和声誉，连续多年成为中国最大的窑炉和陶瓷整线生产装备出口企业。

Modena Technology Limited (formerly Foshan City Modena Machinery Co., Ltd.) was founded in 2003 as a high-tech enterprise specializing in the R&D, manufacturing, sales and after-sale service of ceramic machinery and equipment. Being a leading supplier of ceramic kilns in China, our main products include drying and firing equipment, with the glazing and conveying equipment as supporting products, both of which have promoted the exports of complete plants for ceramic manufacturing. Besides the domestic middle & high-end markets, Modena also exports its products to India, Vietnam, the U.S., Thailand, Taiwan, Indonesia, Malaysia, Bangladesh, Pakistan, Turkey, Saudi Arabia, Nepal, Jordan, Ghana, the U.A.E, Egypt, Mexico, Colombia, etc. Thus we have won a reputable brand name in the international market for Chinese ceramic machinery, especially the firing equipment. We are the largest Chinese enterprise exporting kilns and complete plants for years.

公司国际化的专业队伍、先进的核心技术、良好的运作管理和服务、高性价比的产品，在国际市场上具有很强的竞争能力。公司始终不忘企业 在社会中的责任，一直以节能减排、绿色环保为发展方向，通过节能减排技术推动行业发展和产业升级，努力推动中国陶机走向国际市场，成为世界一流的节能环保建材成套装备企业。

The international and professional team equipped with advanced core technology, combined with excellent operational management and service as well as the cost-effective products have made Modena highly competitive in the international market. Modena has been focusing on the social responsibility, being energy-saving and green-oriented. We drive the industrial development and evolution by our energy-saving technology and we are committed to promote Chinese ceramic machinery in the international markets. Modena has now become a first-class company supplying energy-saving building materials outfits.

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卧式干燥系列

Horizontal Drying Solutions

■ 卧式干燥是陶瓷砖生产设备应用最广泛的干燥设备, 得益于与辊道窑炉相似的传动方式, 利用水平或垂直于辊道窑方向的布局方式, 灵活满足生产广泛的陶瓷砖规格, 轻松实现在线或离线的全自动化生产模式。

Horizontal Dryer, the most widely used drying equipment for ceramic tile production. Thanks to its transmission system similar to roller kiln, its horizontal or vertical position to kiln could flexibly meet the on-line and off-line automatic production modes for a wide range of ceramic products.

■ 摩德娜作为行业内最早推出多层卧式干燥的领军陶机企业, 基于其源于意大利的基因和技术班底, 自20年前便参与推动了卧式干燥的迭代发展, 至今已供应全球多于1200+条干燥的成功案例。

Modena, as the first leading ceramic machine company to introduce the multi-layer horizontal drying solution in the industry, has participated in promoting the iterative development of horizontal dryers for over 20 years, based on its genes and technical team originated from Italy. Till date, Modena has supplied more than 1200+ drying solutions worldwide.

■ 最新一代的卧式干燥系列, 已是集合先进的可视化操作界面, 简化的人机交互操作流程, 深入细节的自动化生产程序, 和高能效的绿色智能干燥热工设备..

The latest generation of horizontal dryer series is a drying equipment collection with an advanced visual operation interface, simplified human-machine interaction operation, in-depth details of automatic programs for production, featuring energy-efficient and intelligent.



多层自循环干燥系列

Multi-Layer Horizontal Dryers

整洁统一的模块化设计, 简单的箱体和风管设计, 却是对干燥性能的极致追求。
Neat and unified modular structure, seemingly simple chamber and duct design, but a keen pursuit of thermal performance.

摩德娜最新的多层干燥, 在全长上分成多个模段, 每个模段为一个独立的干燥单元, 均配备热风加热系统和热风循环系统。每6-10个模段配置一组排湿单元, 实现模段独立控制, 每一节干燥都能根据设定的干燥温度/湿度自动调节。干燥整体达到干燥温度和湿度调控。

Modena's latest multi-layer dryer is divided into multiple module-sections along the entire length, each section is already an independent dryer unit, completed with an independent hot air heating system and hot air re-circulation system. Every 6–10 module section will be equipped with a set of dehumidification system to achieve independent control of the module-section, each section of dryer can be automatically adjusted according to the pre-set drying temperature and humidity. The complete dryer setup safeguards precise control of the drying temperature and humidity.

主要特点:

1. 热风对单片砖上下强对流的热交换形式,干燥效率极高, 达到低温快速干燥的效果, 保证截面温差极小。
2. 热风在单节段内部充分循环, 减少热量无效排放, 极大地提高热能效率。
3. 与摩德娜辊道窑节能系统搭配, 以窑炉余热为热源, 必要时使用燃烧机辅热, 可有效实现干燥“0”能耗生产。
4. 科学设计热风低阻循环, 更线性的风流, 使用小功率循环风机即满足每层的鼓风需要, 降低电耗。

Technical features:

- 1.Higher drying efficiency: hot air circulation with accuracy and speedy drying effect to minimize the sectional temperature variation;
- 2.Better thermal efficiency: fully recycle the hot air in each module to full extent;
- 3.Systematic combination: seamless joint with the kiln by well-designed programs to dynamically source the recycled hot air from the kiln to realize “0” fuel consumption;
- 4.Scientific fluid design: higher linearity to increase the coefficient of drag with application of miniwatt circulating fans;

HDX-9 九层干燥窑

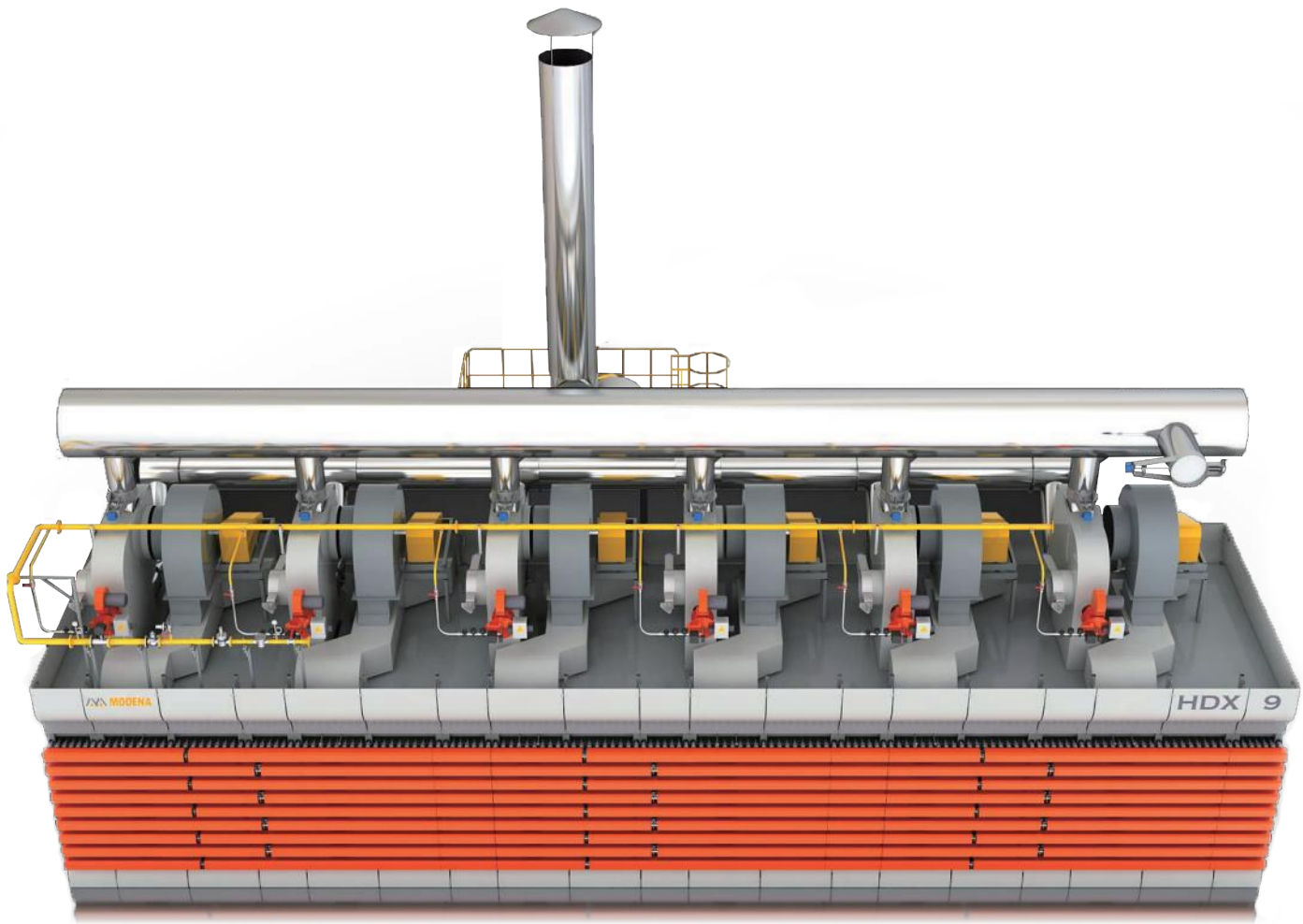
LAYER DRYER

根据各种生产场景，该干燥器的设计内宽最小内宽可为1750mm，最大内宽可达2950mm，并具有以下的特点：

- 超高干燥热利用率，节能显著：在不利用冷却余热及烟气余热时，该干燥器热耗可达到1000-1100kcal/kg水，而常规干燥热耗在2500-3000kcal/kg水左右，两者比较，九层干燥器热利用率约提高50%以上；
- 干燥周期灵活调节：周期可调节范围极具弹性，可根据不同产品的生产工艺要求，通过CIC系统智能调用生产曲线，操作简单方便；
- 极低的干燥缺陷率：在九层干燥器内砖坯运行速度极慢，干燥完成度均匀，并且机械破损为零，干燥合格率可达99.99%以上；
- 产品切换灵活，快速，且稳定：干燥器在固定的节段设一个燃烧机和循环风机，配合总体设独立的排湿系统，不仅每节的温度可以自动调节，且每节热风湿度也可以通过排湿来灵活调节。只利用窑炉余热，窑炉与干燥独立运行，生产稳定性好。对于频繁转换产品时要求快速稳定有明显优势；
- 对比常规五层干燥，九层干燥产量最大可提升80%。厂房利用率提高，减少土建投资；

According to various production scenarios, the design of this series of dryer can have a minimum internal width of 1750mm and maximum up to 2950mm, with the following features:

- Extremely high drying heat utilization efficiency, significant energy savings: When not utilizing waste heat from cooling or exhaust gases, the heat consumption of this dryer can reach 1000-1100 kcal/kg of water. Compared to conventional dryers with heat consumption around 2500-3000 kcal/kg of water, the nine-layer dryer's heat utilization efficiency is increased by over 50%;
- Flexible adjustment of drying cycles: The cycle can be adjusted within a wide range, allowing for flexible adaptation to different product production process requirements. The CIC system can intelligently call production curves, making operation simple and convenient;
- Extremely low drying defect rate: Inside the nine-layer dryer, the speed of the bricks is extremely slow, ensuring uniform drying completion, zero mechanical damage, and drying pass rates of over 99.99%;
- Flexible, fast, and stable product switching: By setting a combustion engine and circulating fan in a fixed segment of the dryer, and coordinating with an independent moisture removal system, not only can the temperature of each section be automatically adjusted, but the hot air humidity of each section can also be flexibly adjusted through moisture removal. By utilizing only waste heat from the kiln, the kiln and dryer operate independently, ensuring good production stability. This offers significant advantages for rapid and stable product changes;
- Estimated a 80% increase in productivity. This dryer, compared to conventional five-layer dryer, offers an 80% increase in production output. This leads to increased factory utilization and reduced civil construction investment.



型号 Model	HDX-9-175	HDX-9-235	HDX-9-295
额定内宽 Nominal Internal Width (mm)	1750	2350	2950
标准外型 Standard External Width (mm)	2350	3000	3600
单元长度 Module Length (mm)	2800	2800	2800
棒距 Roller Pitch (mm)	100/110	100/110	116.67
棒径 Roller Diameter (mm)	55	55	60
辊棒长度 Roller Length (mm)	3300	3950	4550
适用规格 Applicable specifications (mm)	600x600 /600x1200 /1200x2400...	750x1500 /900x1800 /1800x2000/1800x3600...	600x600/800x800 /600x1200/800x1600 /1200x2400/1200x3000...
热源 Heat Source	热风炉、窑炉余热或窑炉烟气		Hot air generator or Recycle hot air or Smoke air

MRD-HB7系列七层辊道干燥器

MRD-HB7 7-LAYER DRYER

更精致紧凑的设计, 满足大产量 / 超大超厚规格产品的生产方式
More refined and compact design, to ideally meet the production of large-output/ big-size and thicker products requirements.

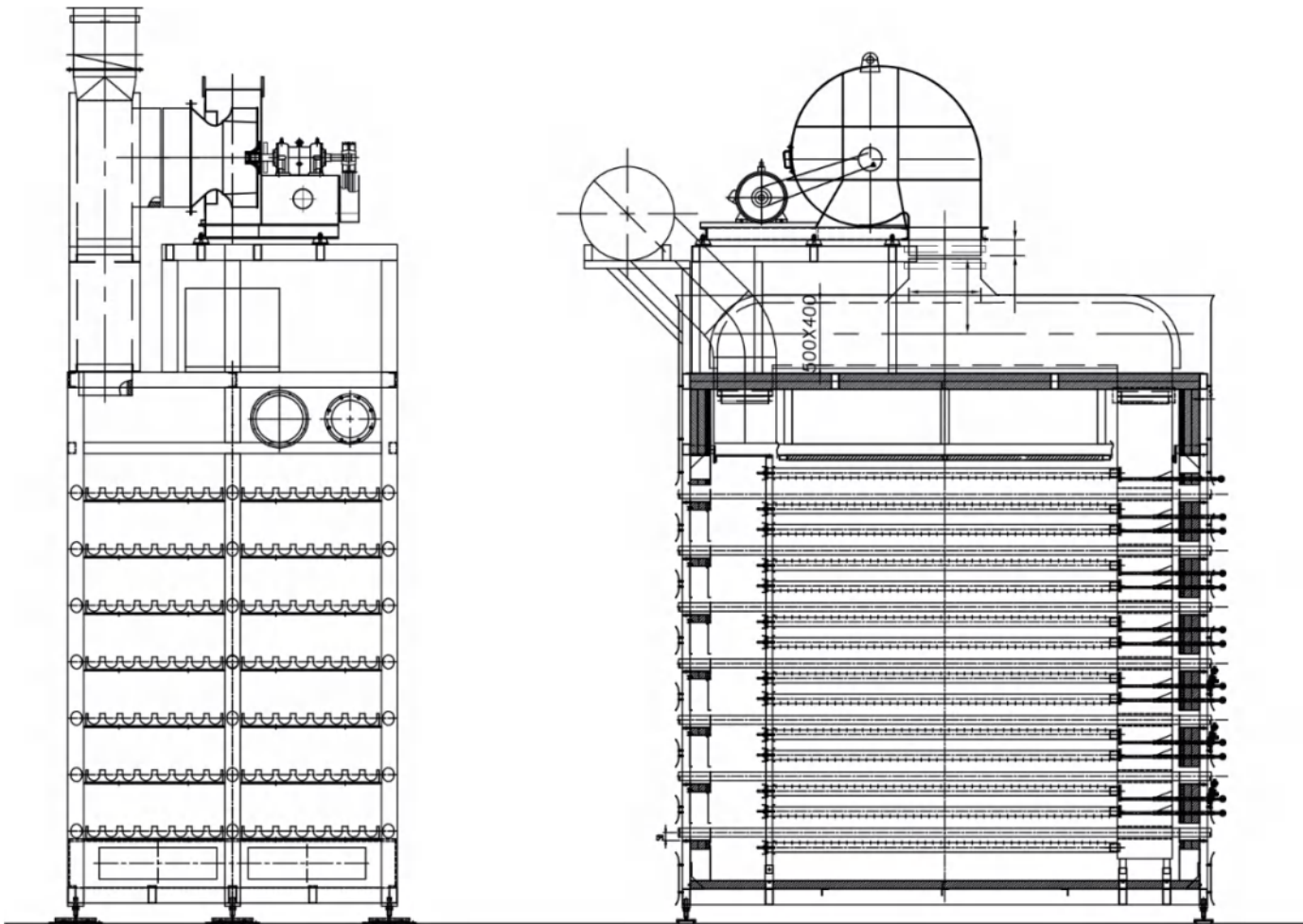
更低能耗, 更高优品率
Lower energy consumption, higher rate of premium quality;

主要特点:

- 升级优化内部风管结构, 每层砖上下面独立调控干燥, 提高热风对砖面对流速度, 同时杜绝上下层影响的可能。
- 更低的走砖速度, 更可靠的传动系统, 砖坯破损的机率几乎为 0 。
- 干燥有效截面温差为+/-5度内。
- 配置升级IPC工业电脑, 输出支持工业4.0平台对接, 实施监控生产工况和能耗; 支持配方存储和干燥温度曲线自动切换。

Main features:

- Upgraded and optimized the intra-wall ducting structure, upper and lower tile surfaces on each layer are independently regulated and dried, the hot air convection velocity above and below the tile surfaces are greatly improved for maximizing drying efficiency,eliminating the possibility of the disturbances between layers.
- Tempered tile transportation speed, more reliable transmission system, virtually maintenance free design.
- Temperature variation of drying section is within +/- 5 degrees
- IPC industrial computer option, supports to dock with industry 4.0 platforms, online monitoring of production conditions and energy consumption; supports unlimited formula management and automatic switching of drying temperature curves.



型号 Model	MRD-H7-175	MRD-H7-220	MRD-H7-255	MRD-H7-285	MRD-H7-300	MRD-H7-320
额定内宽 Nominal Internal Width (mm)	1750	2220	2550	2850	3000	3200
标准外型 Standard External Width (mm)	2900	3350	3700	4000	4150	4350
单元长度 Module Length (mm)	2800	2800	2800	2800	2800	2800
棒距 Roller Pitch (mm)	100/110	100/110	100/110	100/110	100/110	100/110
棒径 Roller Diameter (mm)	50	55	55	55	60	60
辊棒长度 Roller Length (mm)	3150	3650	3950	4250	4450	4650
适用范围 Range of Application	一次烧 / 两次烧内外墙砖 / 地砖 / 陶瓷大板 / 西瓦			Single / Double Firing Wall / Floor / Large Format Slab / Roof Tiles		
热源 Heat Source	热风炉、窑炉余热或窑炉烟气			Hot air generator or Recycle hot air or Smoke air		

MRD-HB6系列六层辊道干燥器

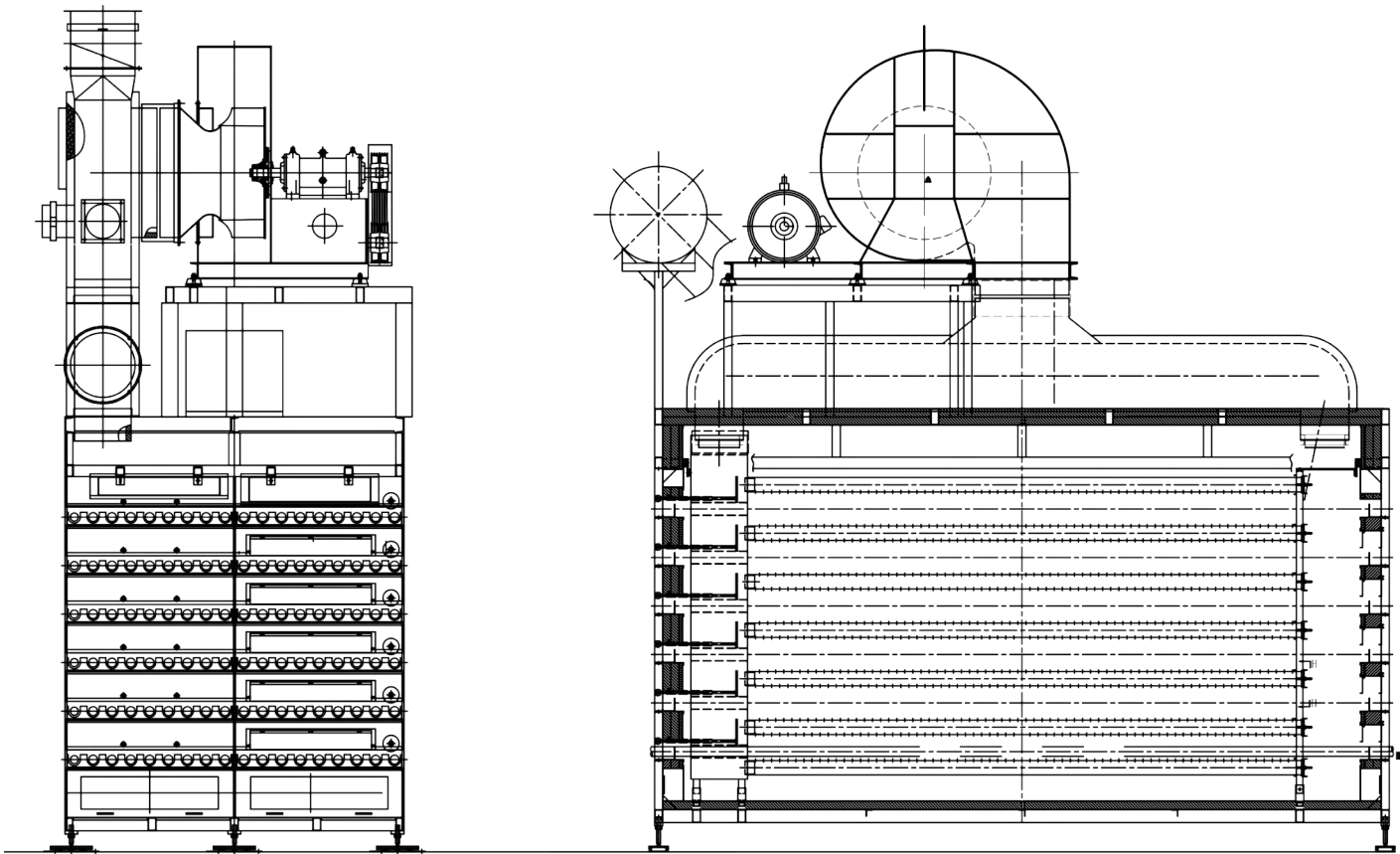
MRD-HB6 6-LAYER DRYER

更灵活的布局可能, 可以同时分层生产不同产品。
With more flexibility in production and workflow, various products can be produced in different layers simultaneously.

- 主要特点:
- 产品转换便捷, 快速灵活而且稳定。
 - 不仅干燥每节的温度和风量都可以自动控制, 而且通过排湿系统, 每一节的湿度都可以灵活调节。
 - 周期范围广, 调节设置灵活. 每层传动均由独立的变频器控制, 理论上可以同时生产不同厚度产品。

Main features:

- Convenient product conversion, with speed and stability.
- Not only the temperature and air volume of each module of dryer can be automatically controlled, but also the humidity of each section can be flexibly adjusted through the dehumidifying system
- Wide cycle range and flexible adjustment settings. Each layer of transmission is controlled by independent inverters, products of various thicknesses can be produced at the same time is now possible.



型号 Model	MRD-H6-220	MRD-H6-255	MRD-H6-285	MRD-H6-300	MRD-H6-320
额定内宽 Nominal Internal Width (mm)	2220	2550	2850	3000	3200
标准外型 Standard External Width (mm)	3350	3700	4000	4150	4350
单元长度 Module Length (mm)	2800	2800	2800	2800	2800
棒距 Roller Pitch (mm)	100/110	100/110	100/110	100/110	100/110
棒径 Roller Diameter (mm)	55	55	55	60	60
辊棒长度 Roller Length (mm)	3650	3950	4250	4450	4650
适用范围 Range of Application	一次烧 / 两次烧内外墙砖 / 地砖 / 陶瓷大板 / 西瓦		Single / Double Firing Wall / Floor / Large Format Slab / Roof Tiles		
热源 Heat Source	热风炉、窑炉余热或窑炉烟气		Hot air generator or Recycle hot air or Smoke air		

MRD-HB5系列风管内置式五层辊道干燥器

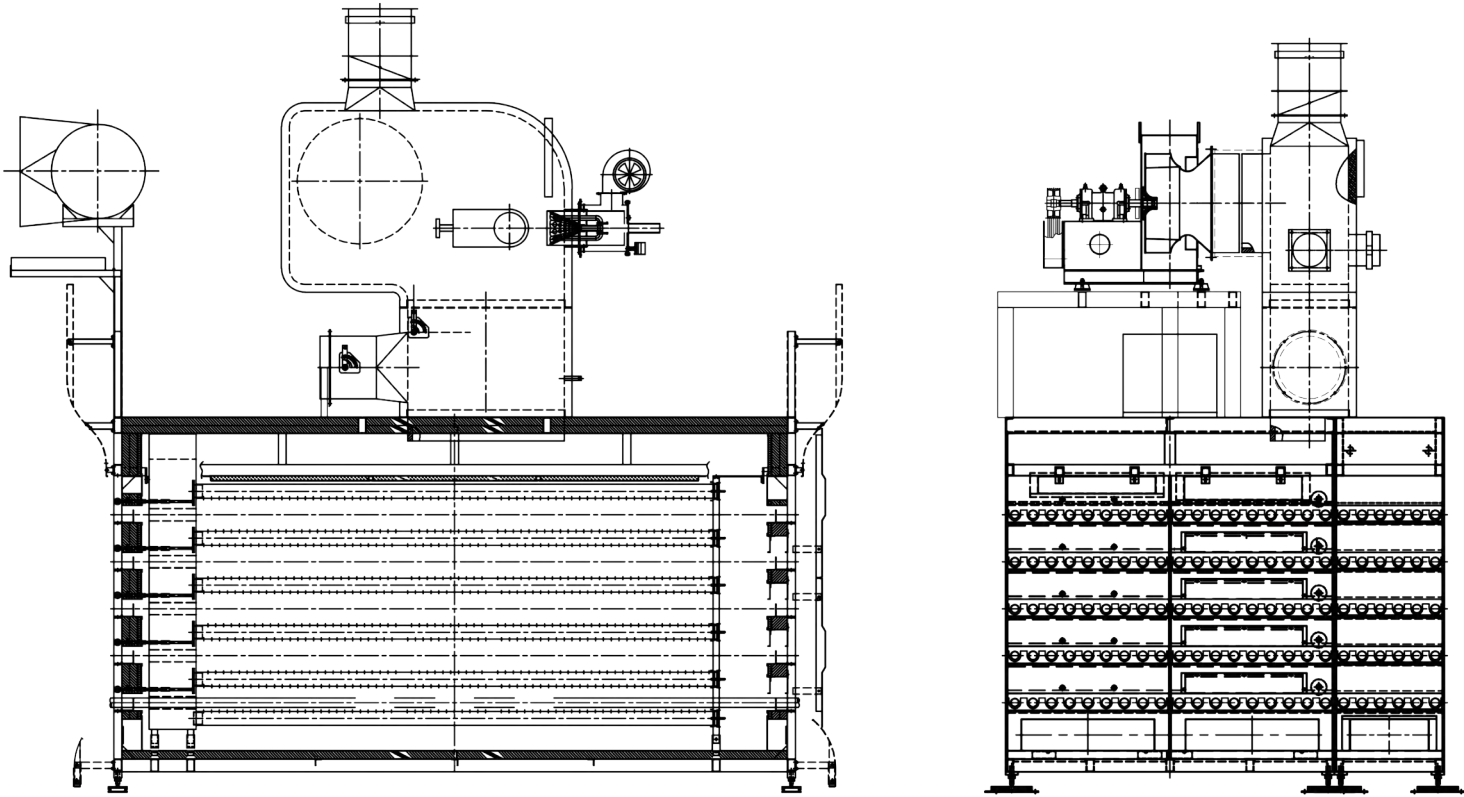
MRD-HB5 5-LAYER DRYER

主要特点:

- 金牌型号, 广泛满足多种产品和场地需求. 性价比首选。
- 出色能耗表现, 在不利用窑炉烟气和余热的情況下, 能耗达到1,000~1,100大卡每公斤水; 配合摩德娜窑炉节能系统, 只用窑炉烟气即满足生产需要, 实现干燥“0”能耗。

Main features:

- Golden model, widely meets the needs of a variety of products and fields. The ideal balance of cost and performance.
- Excellent energy consumption performance, without using kiln flue gas and recycled heat, the energy consumption reaches 1,000~1,100 kcal per kilogram of water evaporation. With our latest kiln energy-saving system, by only using kiln flue gas can meet production requirements, at "0" energy consumption for drying process.



型号 Model	MRD-HB5-235	MRD-HB5-255	MRD-HB5-285	MRD-HB5-300	MRD-HB5-320	MRD-HB5-385	MRD-HB5-435
额定内宽 Nominal Internal Width (mm)	2350	2550	2850	3000	3200	3850	4350
标准外型 Standard External Width (mm)	3000	3200	3500	3650	3850	4900	5400
单元长度 Module Length (mm)	2800	2800	2800	2800	2800	2800	2800
棒距 Roller Pitch (mm)	70	70	87.5	87.5	87.5	116.67	116.67
棒径 Roller Diameter (mm)	40	40	55	60	60	70	70
辊棒长度 Roller Length (mm)	3220	3420	3720	3870	4070	5100	5700
适用范围 Range of Application	一次烧 / 两次烧内外墙砖 / 地砖 / 陶瓷大板 / 西瓦			Single / Double Firing Wall / Floor / Large Format Slab / Roof Tiles			
热源 Heat Source	热风炉、窑炉余热或窑炉烟气			Hot air generator or Recycle hot air or Smoke air			

MRD-H5系列风管外置式五层辊道干燥器

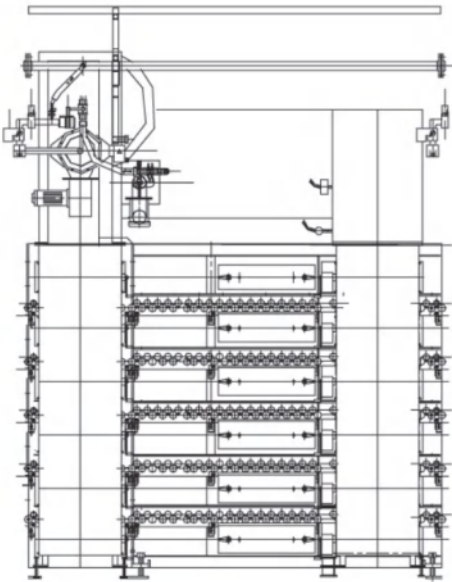
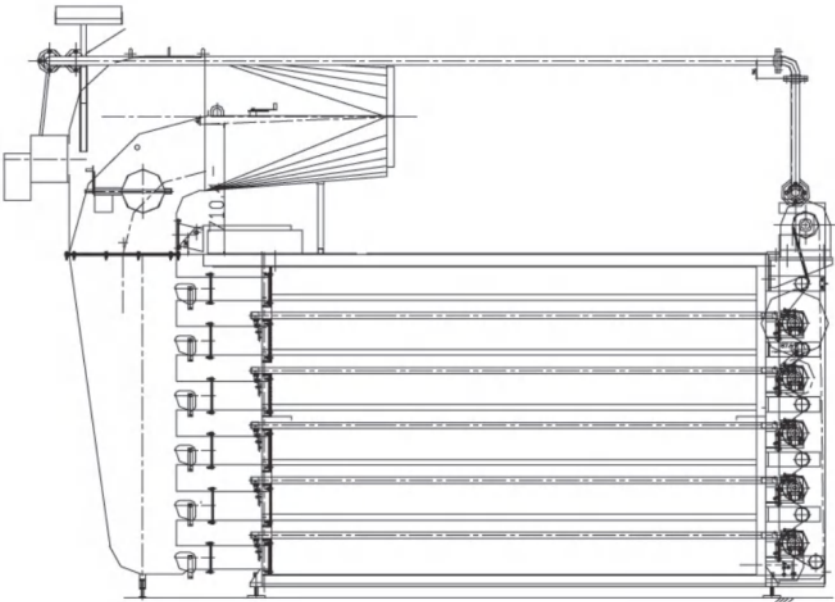
MRD-H5 5-LAYER DRYER

主要特点:

- 专为小规格瓷砖优化设计, 每层之间设置挡板设计, 杜绝各层机械干扰。
- 能够匹配更细的棒距, 满足超薄/小规格产品生产。
- 兼容高含水率产品生产, 升级配备湿度传感器, 更精准调控干燥各阶段排湿速度。

Main features:

- Optimized design for small-size tiles, with partitions between each layer to prevent any mechanical interference.
- Wider roller pitch range allows the production need of ultra-thin/small-size tiles.
- Compatible with the products of higher moisture content, with upgraded humidity sensors for a more accurate control on the speed of moisture removal at each stage of drying.



型号 Model	MRD-H5-235	MRD-H5-255	MRD-H5-285	MRD-H5-300	MRD-H5-320
额定内宽 Nominal Internal Width (mm)	2350	2550	2850	3000	3200
标准外型 Standard External Width (mm)	3250	3450	3750	3900	4100
单元长度 Module Length (mm)	2800	2800	2800	2800	2800
棒距 Roller Pitch (mm)	70	70	90.3	90.3	90.3
棒径 Roller Diameter (mm)	40	40	55	60	60
辊棒长度 Roller Length (mm)	3470	3670	3970	4120	4320
适用范围 Range of Application	一次烧 / 两次烧内外墙砖 / 地砖 / 陶瓷大板 / 西瓦		Single / Double Firing Wall / Floor / Large Format Slab / Roof Tiles		
热源 Heat Source	热风炉、窑炉余热或窑炉烟气		Hot air generator or Recycle hot air or Smoke air		

MRD-H2系列双层辊道干燥器

MRD-H2 2-LAYER DRYER

主要特点:

- 上下层独立干燥通道, 专门为双层烧成窑分层生产不同产品规格配套设计。
- 分段自循环干燥设计, 对比一般双层干燥大大提高热能效率。
- 匹配更细的棒距, 满足超薄/小规格产品生产。

Main features:

- Independent drying channels are specially designed on each layer, perfectly synced to double-layer kilns for flexible production of different products,simultaneously.
- The design of modulus self-recirculation drying greatly improves the thermal energy efficiency compared with ordinary double-layer dryer.
- Suitable for smaller roller pitch to meet the production of ultra-thin/small-size tiles.



型号 Model	MRD-H2-235	MRD-H2-255	MRD-H2-285	MRD-H2-300	MRD-H2-235
有效内宽 Nominal Internal Width (mm)	2350	2550	2850	3000	3200
标准外型 Standard External Width (mm)	3000	3200	3500	3650	3850
单元长度 Module Length (mm)	2100	2100	2100	2100	2100
棒距 Roller Pitch (mm)	70	70	87.5	87.5	87.5
棒直径 Roller Diameter (mm)	40	40	55	60	60
棍棒长度 Roller Length (mm)	3220	3420	3720	3870	4070
适用范围 Range of Application	一次烧 / 两次烧内外墙砖 / 地砖 / 陶瓷大板 / 西瓦		Single / Double Firing Wall / Floor / Large Format Slab / Roof Tiles		
热源 Heat Source	热风炉、窑炉余热或窑炉烟气		Hot air generator or Recycle hot air or Smoke air		

MRD-H1系列单层辊道干燥器

MRD-H1 1-LAYER DRYER

主要特点:

- 分段自循环干燥设计, 对比一般单层干燥大大提高控制精度, 满足产品精烧需求。
- 管道式供热设计, 有效提供温度均匀的干燥气氛, 提升产品优等率。

Main features:

- The design of modulus self-recirculation drying greatly improves the thermal energy efficiency compared with ordinary single-layer dryer.
- Tubular heat-supply design, effectively provided drying atmosphere with uniform temperature, and improved the product premium rate.



窑前干燥

PRE-KILN DRYERS

常规窑前干燥器

CONVENTIONAL PRE-KILN DRYER

主要特点：

- 使用吹风盒/吹风管结构设计, 有效地将砖坯表面水分干燥, 以达到提高砖坯强度, 延长储坯时间的作用; 同时有助于砖坯达到快速烧成条件。
- 仅需要利用小部分窑炉干净余热便满足生产需要, 连续生产无需提供额外热源, 升级配备小型高速烧嘴避免窑炉空窑造成热量不足。

Main features:

- Optional structure design of air-box / air-duct structure, effectively dries the surface moisture of the unfired tile, so as to improve the tile strength and prolong the storage time of the unfired tile; simultaneously, it helps to achieve fast firing conditions.
- Only need to use a small volume of the clean recycled heat from the kiln to meet the production needs, need not to provide additional heat sources under continuous production. (Upgradable with high-speed burners to avoid the lack of heat caused by kiln feeding gap)



釉线干燥

GLAZING LINE DRYER

主要特点：

- 将吹风盒设计运用到釉线干燥上, 能够迅速有效地干燥喷墨/喷釉和施布干粒装饰后的砖坯表面的水分, 保证产品装饰效果一致性, 以及快速烧成提供条件, 大大提高施釉产品的优等率。
- 仅需要利用小部分窑炉干净余热便满足生产需要, 连续生产无需提供额外热源, 升级配备小型高速烧嘴避免窑炉空窑造成热量不足。

Main features:

- The design of the blowing box/duct is applied to the drying process in the glaze line, which can effectively dry the moisture from the surface of the tile after inkjet printing/glaze spraying and application of frit decoration, to ensure the consistency of the product decoration effect after-firing, and to provide ideal conditions for fast firing, greatly improving the premium rate of glazed products.
- Only need to use a small volume of the clean recycle heat from the kiln to meet the production needs, need not to provide additional heat sources under continuous production. (Upgradable with high-speed burners to avoid the lack of heat caused by kiln feeding gap)



隧道干燥 (适用于储坯车)

TUNNEL DRYER (FOR STORAGE BOXES)



主要特点:

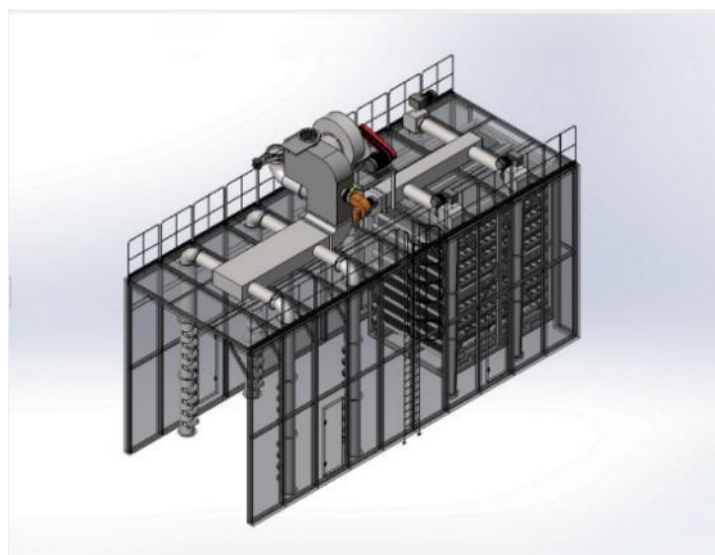
- 模块化设计, 各箱体/区段可采用热风自循环系统, 使储坯车充分与热风进行热交换, 湿度由独立的排湿系统控制, 湿度适应不同产品进行准确控制。
- 灵活设计, 按车间需要可设计卷帘门或电动提拉门。
- 供热方式多样, 可配合窑炉余热作为主要热源, 热风炉为辅热, 高效节能使用。

Main features:

- Modular design, hot air self circulation system can be adopted for each box / section, so that the storage box can fully exchange heat with hot air. Meanwhile the humidity is controlled by an independent dehumidification system, can be accurately controlled flexible to different products' requirement..
- Flexible design, rolling shutter door or electric sliding door can be designed according to workshop needs.
- There are various heating methods, which can be used with kiln waste heat as the main heat source and hot air generator as the auxiliary heating source, which are stable and energy-saving for production.

梭式干燥

SHUTTLE DRYER



主要特点:

- 全自动PLC控制, 根据时间控制轻松完成整个干燥曲线温度和湿度动态变化控制。
- 热风内循环设计, 低温高速气流在室内充分与坯体热交换, 不仅干燥效率高, 而且截面温差极低, 干燥效果好。
- 节省空间, 投入较低, 适合配合LGV储坯系统使用, 提高坯体强度及减少出品色差。

Main features:

- Fully automatic PLC control, easily complete the dynamic change control of temperature and humidity during the entire drying process according to the cycle time setting.
- Hot air internal circulation design, low-temperature and high-speed air flow can execute fully heat exchange with the green body in the chamber, which not only realises a high drying efficiency, but guarantee a good drying effect with limited sectional temperature difference.
- Space saving, low investment, suitable for the use with LGV box storage system, greatly improves the biscuit strength and strictly controls the product color tone.

吊笼式干燥

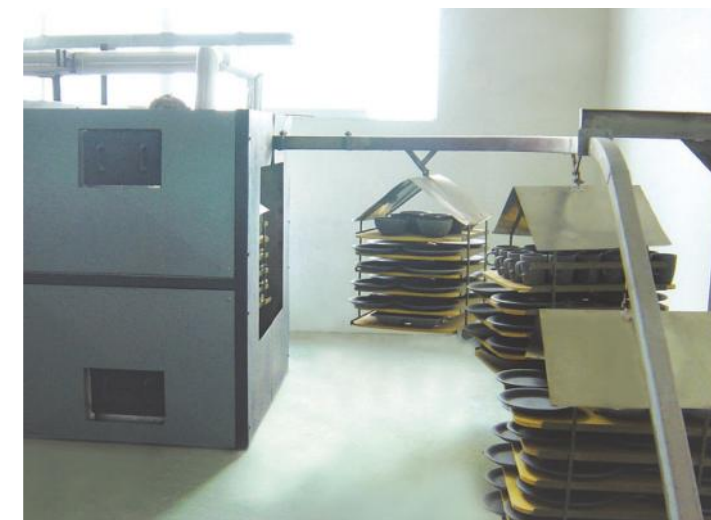
SUSPENDED BASKET DRYER

主要特点:

- 干燥坯体效率极高。
- 可充分利用窑炉余热。
- 节省厂区占地面积, 设置吊篮在厂房高度空间位置。
- 使工厂内工艺流程顺畅, 降低工人劳动强度。

Main features:

- High efficiency in green body drying.
- Fully use of recycling hot air from kiln.
- Space saving with setting the suspending grid on higher position.
- Smoothen the process flow in the workshop, and lower the labor intensity.



立式干燥系列

Vertical Drying Solutions











- 主要特点:
- 最出色的占地产能比。
 - 柔性化生产模式, 可以满足存放不同规格产品。











- Main features:
- The best space-to-capacity ratio
 - Realization of flexible production, able to meet the storage of products at different sizes,



干燥箱进窑布局图

BOX LOADING LAYOUT

尺寸 Sizes					
烧成后砖体所有尺寸 (最大收缩率8%) Dimensions of the fired pieces of all main sizes(max shrinkage 8%)	150×150	200×500	250×250	200×300	300×300
型号 Type	每层砖坯最大装载片数 Max number of pieces to load per layer				
EVR 15 回转吊笼运行尺寸 Working dimensions of the pivoted basket	(6×8) 48 	(5×6) 30 	(4×5) 20 	(3×6) 18 	(3×4) 12 
EVR 19 回转吊笼运行尺寸 Working dimensions of the pivoted basket	(8×9) 72 	(6×7) 42 	(5×5) 25 	(4×7) 28 	(4×4) 16 

尺寸 Sizes					
烧成后砖体所有尺寸 (最大收缩率8%) Dimensions of the fired pieces of all main sizes(max shrinkage 8%)	330×330	300×600	400×400	500×500	600×600
型号 Type	每层砖坯最大装载片数 Max number of pieces to load per layer				
EVR 15 回转吊笼运行尺寸 Working dimensions of the pivoted basket	(3×4) 12 	(3×2) 6 	(2×3) 6 	(2×2) 4 	(1×2) 2 
EVR 19 回转吊笼运行尺寸 Working dimensions of the pivoted basket	(3×4) 12 	(4×2) 8 	(3×3) 9 	(2×2) 4 	(2×2) 4 

卫生洁具干燥房系列

SANITARY WARE DRYING CHAMBER

主要特点：

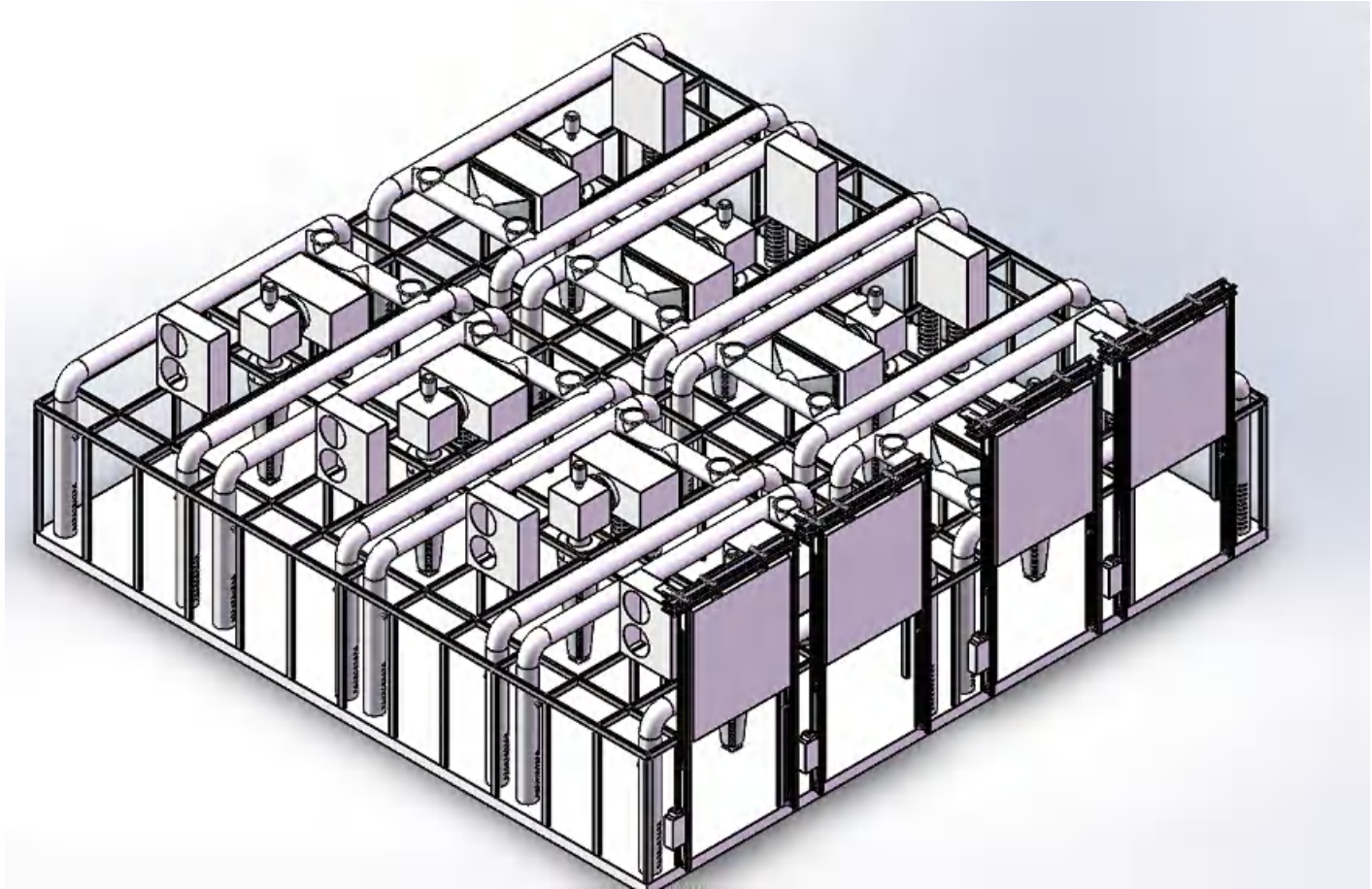
- 灵活设计, 按车间需要可设计卷帘门或电动提拉门。
- 供热方式多样, 可配合窑炉余热作为主要热源, 热风炉为辅热, 高效节能使用。
- 模块化设计, 可根据产量扩增需求进行二次投入改造, 扩大产量。
- 内部气流高效循环, 保证室内各区域湿度温度状态一致。

Main features:

- Flexible design, rolling shutter door or electric sliding door can be designed according to actual space requirement.
- Various methods of heat supply, kiln recycling hot-air can be used as the main heat source, with heat supplement of hot-air generator, greatly improve the energy efficient in general.
- Modular design, secondary development can be carried out according to the demand of output expanding.
- Efficient internal air flow circulates, ensure the consistency of humidity and temperature in all areas of the room

每条通道的装载车的排数 No. of rows of cars per channel	2	4
内部通道宽度 Internal channel width	3600mm	7490mm
每一排的装载车的数量 No. of cars per row	5 - 10	
装载车有效宽度 Useful car width	900mm	
装载车有效长度 Useful car length	1960mm	
装载车最大宽度 Maximum car width	1000mm	
装载车最大长度 Maximum car length	2060mm	
装载车高度（含运送坯体） Height of the car (with parts)	2000mm	
装载车的平均运载数量 Average specific car load	15 parts	
装载车平均载重（干燥） Average car load in weight (dry)	220-240kg	
平均坯体的水分含量 Mean water content in the parts	14% - 16%	
加工循环总周期（含装载车更换时间） Total process cycle including car change	12 - 16 hours	
最小干燥周期 Minimum drying cycle	10 hours	

以上数据为参考数据，实际尺寸可根据客户需求定制。

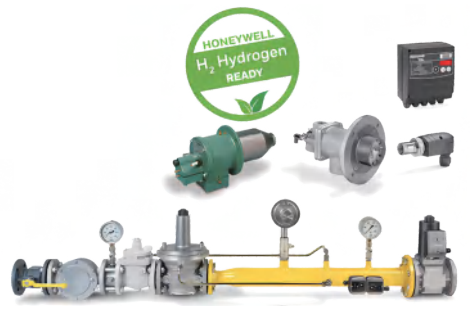


陶瓷干燥应用案例

APPLICATION OF INDUSTRIAL DRYING



采用智能化技术，如人工智能、物联网和大数据分析等，帮助陶企实现更精准的生产计划、优化生产流程，提高生产线的自动化程度。
By adopting intelligent technologies such as artificial intelligence, the Internet of Things, and big data analysis, ceramic enterprises can achieve more accurate production plans, optimize production processes, and improve the automation level of production lines.



摩德娜科技凭借对全规格、全表面和全厚度兼容性的强调，展示了在大规格陶瓷板生产线布局中的前瞻性思维。摩德娜科技与霍尼韦尔合作推出的氢能燃烧系统，为现代陶瓷生产注入了更为环保和高效的动力。
Modena Technology showcases its forward-looking thinking in the layout of large-scale ceramic plate production lines, with an emphasis on full specification, full surface, and full thickness compatibility. At the same time, the hydrogen combustion system jointly launched by Modena Technology and Honeywell injects more environmentally friendly and efficient power into modern ceramic production.



以客户之愿景为己任
Your Vision Our Mission



荣誉见证品质
HONORS WITNESS QUALITY

