



HTG系列全自动陶瓷过滤机

HTG SERIES OF FULL-AUTOMATIC CERAMIC FILTER



江苏省宜兴非金属化工机械厂有限公司
Jiangsu Province Yixing Nonmetallic Chemical Machinery Factory Co., Ltd.

企业简介

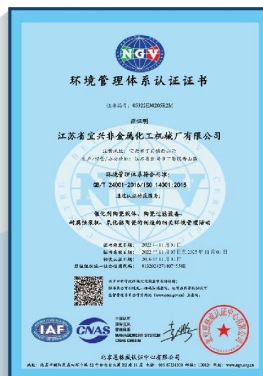
COMPANY PROFILE

江苏省宜兴非金属化工机械厂有限公司创建于 1957 年，2001 年由国企改制为股份制企业。是一家以结构陶瓷、微孔陶瓷为核心的国家重点高新技术企业。企业占地面积 15 万 m^2 ，拥有固定资产一个多亿，下设一个设计室、一个材料研究室、一个新材料实验工场、三个分厂，现有员工 500 多人。

Jiangsu Province Yixing Nonmetallic Chemical Machinery Factory Co., Ltd. was founded in 1957, and it was restructured from a state-owned enterprise into a joint-stock enterprise in 2001. It is a national key high-tech enterprise focusing on structural ceramics and micro-porous ceramics. It covers an area of 150,000 m^2 with nearly 100 million yuan of fixed assets. It has 1 design office, 1 new material laboratory, 1 new material pilot plant, 3 branch factories, and more than 500 employees.

企业先后被评为国家重点高新技术企业、江苏省专精特新中小企业、江苏省知识产权先进企业、江苏省知识产权战略示范企业、江苏省“AAA”级资信等级企业、江苏省“AAA”重合同守信用企业、江苏省文明单位，是科技部非金属材料产业基地骨干企业，并通过了 ISO9001:2015 质量管理体系及 IATF16949:2016 质量管理体系认证，通过了 ISO14001:2015 环境管理体系和 ISO45001:2018 职业健康安全管理体系认证。宇星商标 2015 年~2018 年被评为江苏省著名商标，宇星牌产品 2015 年~2018 年被评为江苏省名牌产品。

The company has been rated as a national key high-tech enterprise, Specialized, Refined, Characteristic and Innovative "Small and Medium-sized Enterprises in Jiangsu Province, Intellectual Property Advanced Enterprise in Jiangsu Province, Intellectual Property Strategy Demonstration Enterprise in Jiangsu Province, Credit Grade AAA Enterprise in Jiangsu Province, An Enterprise of "Honoring Contracts and Keeping Promise" of Grade AAA in Jiangsu Province, Civilized Unit in Jiangsu Province. It is a backbone enterprise in the non-metallic material industry base of the Ministry of Science and Technology. It has passed the certification of ISO9001:2015 and IATF16949:2016 quality management systems, as well as ISO14001:2015 environmental management system and ISO45001:2018 occupational health and safety management system. From 2015 to 2018 Yuxing trademark is awarded the famous trademark in Jiangsu Province, and from 2015 to 2018 Yuxing brand product is awarded as famous brand product of Jiangsu Province.





长期以来，公司高度重视科技创新工作，拥有一个省级非金属材料工程技术研究中心，先后承担 10 多项省级以上科技计划项目，其中：

For a long time, the company has attached great importance to technological innovation. It has a provincial non-metallic material engineering technology research center, which has undertaken more than 10 provincial technology projects, including:

- 国家 863 计划项目 2 项，
- 国家十三大治理专项国家重点研发计划项目 2 项
- 国家级科技创新基金项目 6 项，
- 国家级、省级火炬计划项目 4 项，
- 省科技成果转化项目 1 项，
- 省科技攻关项目、省科技支撑计划项目 4 项。
- 拥有专利 67 件，其中发明专利 34 件，实用新型专利 33 件。
- 制定国家标准 1 只牵头制定或主要制定国家行业标准 5 只。
- 拥有国家重点新产品 4 只。

2 from National 863 Program

2 Special national key research & development program projects for national 13th Five-year atmospheric purification

6 from National Science and Technology Innovation Fund

4 from China Torch Program and Provincial Torch Program

1 project of provincial technology achievement transformation

4 key science and technology projects and projects from Provincial Key Technology R&D Program

It has 67 patents, including 34 patents for invention and 33 patents for utility models

It formulates 1 national standard and takes the lead to formulate or mainly formulates 5 national industry standards.

It has 4 national key new products.



技术优势 TECHNICAL ADVANTAGES

公司是国家重点高新技术企业、国家级非金属材料产业基地，江苏省非金属材料工程技术研究中心，全国分离机械标准化技术委员会委员。

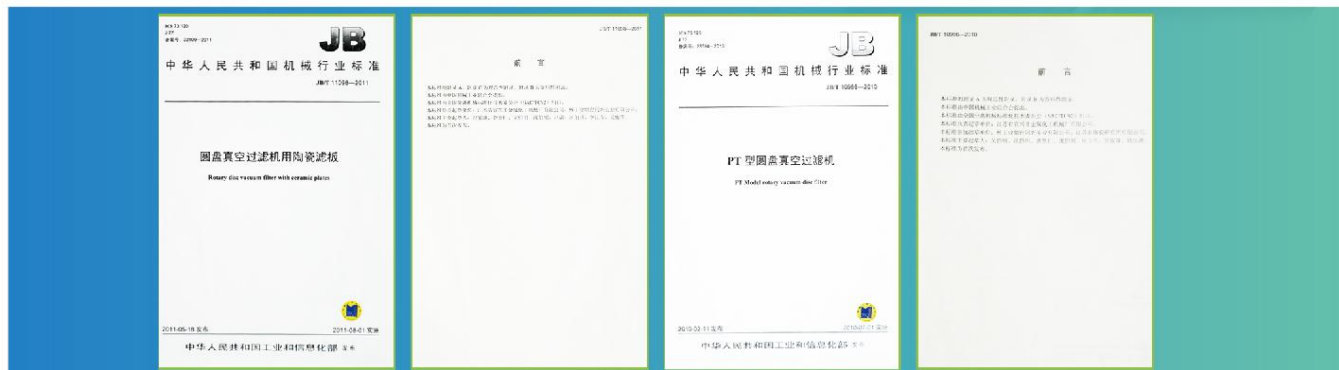
The company is a national key high-tech enterprise, an industrial base of national non-metallic materials, a non-metallic material engineering technology research center of Jiangsu Province, and a member of the National Technical Committee on Separation Machinery Standardization.



研发实力 R&D strength

公司于上世纪九十年代就开始研发、制造陶瓷过滤机，1997 年成功研制出拥有自主知识产权的全自动陶瓷过滤机，打破了国外公司的技术封锁和对国内市场的垄断。是陶瓷过滤机和陶瓷过滤板国家行业标准牵头负责起草单位，拥有 8 项陶瓷过滤机国家专利。

The company has started developing and manufacturing ceramic filters since the 1990s. In 1997, it successfully developed a full-automatic ceramic filter with independent intellectual property rights, breaking the overseas companies' blockade on techniques and monopoly over domestic market, and filling a domestic blank. It is the unit in charge of taking the lead to draft the national industry standard on ceramic filter and ceramic filter plate. It has 8 national patents for ceramic filter.



研发、生产装备

THE R&D AND PRODUCTION EQUIPMENT

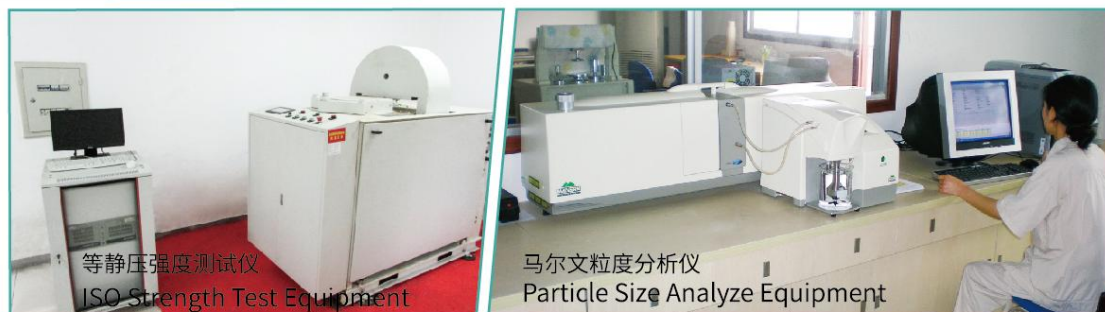
国内较早研发制造陶瓷过滤机的企业，拥有创新的设计理念，丰富的设计经验和先进的制造技术。

近 70 年专业研发生产微孔陶瓷、结构陶瓷的历史，拥有先进的研发装备和雄厚的研发实力。

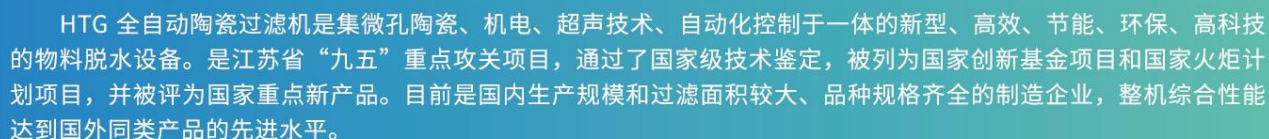
通过对分配盘真空系统、超声波清洗系统和清洗技术、陶瓷过滤板等多方面的设计、改进及技术创新，突破了陶瓷过滤机大型化、超大型化的关键技术。连续开发了 60m²、80m²、100m²、120m²、144m²、240m² 系列机型。



The company has the innovative design concept, rich design experience and leading manufacturing technology. Dedicated in R&D and production of micro-porous ceramics and structural ceramics for nearly 70 years, the company has the international advanced and domestic leading R&D equipment and solid R&D strength. Through design, improvement and technological innovation of the distribution disk vacuum system, ultrasonic cleaning system and cleaning technology, ceramic filter plate, etc., the company has made a breakthrough in key technologies of large and ultra-large ceramic filters. The developed 60 m², 80 m², 100 m², 120 m², 144 m², and 240 m² machines have continuously filled the international and domestic blanks.



PRODUCT INTRODUCTION



HTG full-automatic ceramic filter is new, efficient, energy-saving and environment-friendly high-tech dewatering equipment that integrates micro-porous ceramics, electromechanical and ultrasonic technologies and automatic control. It is a key project of the "Ninth Five-Year Plan" in Jiangsu Province. It has passed the national technical appraisal and been listed as project of National Innovation Fund and China Torch Program, and rated as National Key New Product. Its comprehensive performance has reached the advanced level of similar products abroad. Our company is a domestic manufacturer with large production scale and filtration area and complete specifications.



产品特点 Product features

- 01 高真空度、滤饼良好的脱水 & 干燥性能，产能效率高，固体回收超群。
Dewatering & drying performance with high vacuum and good filter cake, high productivity and excellent solids recovery.
- 02 滤液清澈、整洁的工作环境，无污染全方位环保系统
Clear filtrate, neat work environment, and all-directional environmental protection system without pollution
- 03 PLC程序控制，自动化程度高，操作简便，设备利用率高。
PLC program control, high automation, easy operation, and high utilization of equipment.
- 04 结构设计紧凑，性能优良，超低的运行和维护成本，节能效果显著。
Compact design, high performance, ultra-low operating and maintenance costs, and remarkable energy saving.
- 05 陶瓷过滤板使用寿命长，应用领域宽。
Ceramic filter plate has a long service life and wide application.

工作原理 Working principle

全自动陶瓷过滤机主要包括转子、分配头、搅拌器、刮刀、料浆槽、反冲清洗系统、超声波清洗系统、PLC 操作系统及电控系统。

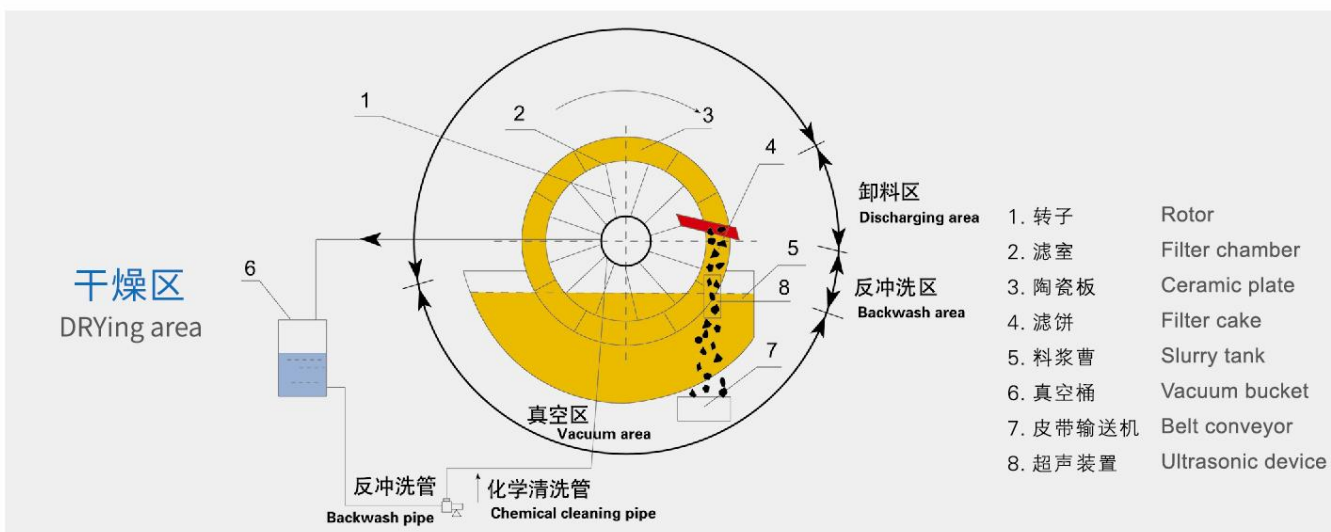
在真空区工作开始时，浸没在浆料中的陶瓷过滤板在真空的作用下，在陶瓷板表面快速形成一层较厚的颗粒堆积层，滤液通过陶瓷板过滤至分配头到达真空桶。在干燥区，滤饼在真空作用下继续脱水，使滤饼进一步干燥，滤饼干燥后，在卸料区时被刮下通过皮带输送至所需的地方。

卸料后的陶瓷板最后进入反冲洗区，经过滤后的反冲液通过分配头进入陶瓷板内部，冲洗堵塞在陶瓷板微孔中的颗粒，至此完成一个过滤操作循环。当过滤机运行较长时间后，可采用超声及化学介质联合清洗，以保持过滤机的高效运行。

The full-automatic ceramic filter mainly consists of the rotor, distribution head, agitator, scraper, slurry tank, back flushing system, ultrasonic cleaning system, PLC operating system and electric control system.

When the vacuum zone starts working, the ceramic filter plate immersed in the slurry forms a thick layer of granular stack rapidly on the surface of the ceramic plate under the action of vacuum, and the filtrate is filtered through the ceramic plate to the distribution head to reach the vacuum drum. In the drying zone, the filter cake continues to be dewatered under the action of vacuum until dry, and then it is transported by belt to the desired place after being scraped off in the discharge zone.

After discharging, the ceramic plate finally enters the backwash zone. The filtered backwash fluid enters the interior of the ceramic plate through the distribution head and flushes the particles blocked in the micro-pore of the ceramic plate, thus completing a cycle of filtering operation. After running for a long time, the filter can be cleaned by combining the ultrasonic and chemical media to maintain its efficient operation.



陶瓷过滤机型号说明 Model description of ceramic filter

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一圈过滤面积 (m²)
Filtration area in one cycle (m²)

整机过滤面积 (m²)
Filtration area of complete machine (m²)

全自动陶瓷过滤机
Full-automatic ceramic filter

过滤面积选型
Selection of
filtration area

1 ~ 240m²

技术规格

Technical Specifications

参数 Parameter	型号 Model	HTG15/5	HTG20/5	HTG25/5	HTG30/5	HTG45/5	HTG50/5	HTG60/5	HTG80/5	HTG100/5
过滤面积(m ²) Filtration area		15	20	25	30	45	50	60	80	100
安装功率(KW) Installed power		17	17	18	20	22	22	29	39	43
重量 (t) Weight		7	7.2	7.9	9.5	11.3	12.5	14	18.5	23
长 (mm) Length		3930	4470	4690	4810	5470	5690	6130	7253	8094
宽 (mm) Width		3410	3510	3510	3510	3510	3510	3510	3510	3510
高 (mm) Height		2980	2980	2980	3035	3035	3035	3035	3035	3035

参数 Parameter	型号 Model	HTG120/6	HTG144/12	HTG180/12	HTG204/12	HTG240/12	HTG06/3	HTG09/3	HTG12/3	HTG15/3
过滤面积(m ²) Filtration area		120	144	180	204	240	6	9	12	15
安装功率(KW) Installed power		57	67	114	116.8	121	8	10	11	14
重量 (t) Weight		25	28.5	39	42	45	5.6	7.9	8.5	9.2
长 (mm) Length		9437	7260	9670	10470	11670	3062	4170	4360	4770
宽 (mm) Width		3565	5330	5330	5330	5330	3025	2935	3200	3200
高 (mm) Height		3295	4786	4786	4786	4786	2750	2750	2750	2750

参数 Parameter	型号 Model	HTG18/3	HTG21/3	HTG24/3	HTG30/3	HTG45/3	HTG60/4	HTG80/4	HTG01/1	HTG51/3.75	HTG45/3.75
过滤面积(m ²) Filtration area		18	21	24	30	45	60	80	1	51	45
安装功率(KW) Installed power		15	15	15	18	22	30	40	6	22	22
重量 (t) Weight		9.9	10.2	11.2	12.8	15.6	18.5	24	2.2	13.1	12
长 (mm) Length		4780	5375	5453	6318	7998	8054	9562	1910	6300	6100
宽 (mm) Width		3200	3200	3200	3400	3410	3150	3510	1900	3020	3020
高 (mm) Height		2750	2750	2750	2750	2750	3270	3233	1780	2720	2720

- 可按用户要求定制
Customizable

陶瓷过滤板

CERAMIC FILTER PLATE

新型微孔陶瓷过滤板是陶瓷过滤机的核心部件，我公司拥有 5 项陶瓷过滤板国家发明专利，被列为国家创新基金项目和高新技术产品。

近 70 年专业研发生产微孔陶瓷、结构陶瓷的技术和经验，为用户提供满足多行业、众领域不同工艺应用的陶瓷过滤板。



白玉刚材质 Made of corundum

The new micro-porous ceramic filter plate is the core component of ceramic filter and our company has 5 national invention patents for it, and it is listed as the national innovation fund project and high-tech product. Specialized in R & D and production of micro-porous ceramics and structural ceramics for nearly 70 years, we have provided users with the ceramic filter plates applied in different processes of enormous industries and fields.



结构功能

Structural Function

在工作中，当陶瓷微孔适当时，由于毛细作用的缘故，微孔中所含的水份不会脱出，始终保持充液状态，空气不能透过过滤板，故能耗低，固液分离作用更好。

In the work, when the ceramic micro-pores are appropriate, due to the capillary action, the water contained in the micro-pores will not escape, the liquid will always remain filling, and the air cannot pass through the filter plate, so low energy is consumed and better solid-liquid separation is achieved.

特点
Characteristics

产能效果高
High Productivity

使用寿命长
Long Service Life

应用领域宽
Wide Application

陶瓷过滤板选型
Selection of
Ceramic Filter Plate

1m² 2m² 3m² 3.75m² 4m² 5m²
6m² 8m² 12m²

过滤精度选择
Selection of Filter
Fineness

0.85 μm 1.25 μm 2 μm 5 μm

- 可按用户要求定制各种规格的陶瓷过滤板
Specifications of ceramic filter plates can be customized



技术服务 Technical Service

我们以开拓、创新、全方位服务的精神，竭诚为国内外铁精矿、铜精矿、锌精矿、硫精矿、镍精矿、铅精矿、铝精矿、金精矿、钒精矿、非金属精矿等矿山精矿的过滤和脱水，低品位磷矿选矿和各种尾矿的过滤和脱水等工艺、环境问题提供理想的解决方案。

In the spirit of pioneering, innovation and all-round service, we are dedicated to providing best solutions for filtration and dewatering of domestic and foreign iron concentrates, copper concentrates, zinc concentrates, sulfur concentrates, nickel concentrates, lead concentrates, aluminum concentrates, gold concentrates, vanadium concentrates, non-metallic concentrates, as well as beneficiation of low-grade phosphorite, filtration and dewatering of various tailings, and other technological and environmental problems.

走向国际 Go international



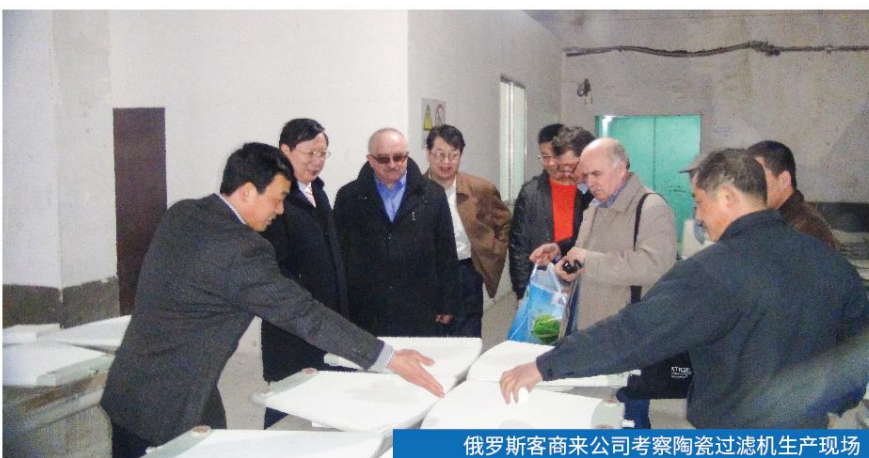
参加澳大利亚矿业展



参加智利矿业展



参加南非矿业展



俄罗斯客商来公司考察陶瓷过滤机生产现场



出口蒙古国图木尔廷—敖包锌矿获该国优秀单位奖



120m²陶瓷过滤机发往印度尼西亚

用户现场 User Site



制作现场 Production Site



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