Henan Filtearth Environmental Protection Technology Co., Ltd.

FIBER BED MIST ELIMINATOR

Product Catalog 2026

Custom-Engineered Mist Elimination for Corrosive & Critical Industrial Processes

Sulfuric Acid • Chlor-Alkali • Polysilicon • Semiconductor • Phosphoric Acid • Petrochemical

ISO 9001 Certified | SGS Verified | Full Custom Engineering | OEM Available

No. 271 Huanghe Avenue, Xinxiang County, Henan Province, China

Company Profile

A typical large-scale chemical / petrochemical complex — a core market segment served by Filtearth fiber bed mist eliminators.

Filtearth (Henan Filtearth Environmental Protection Technology Co., Ltd.) specializes in the research, development, manufacturing and service of fiber bed mist eliminators for corrosive and critical industrial processes. Our core technology — the Filtearth fiber bed — achieves a mist removal efficiency of over 99.99%, outperforming many established international brands and holding a leading position in the domestic market.

We provide fully custom-engineered solutions for the sulfuric acid, chlor-alkali, polysilicon, semiconductor, phosphoric acid and petrochemical industries, with an annual production capacity of approximately 2,000 sets of fiber bed elements and complete mist elimination systems. Every unit is backed by full material certification, dimensional inspection and performance verification before delivery.

Filtearth holds ISO 9001 quality management certification and SGS verification, and exports to the Middle East, Southeast Asia and other overseas markets. We support OEM manufacturing for system integrators and EPC contractors, and welcome new distributor partnerships worldwide.

Why Choose Filtearth

- 10+ years of dedicated focus on industrial gas-liquid separation and fiber bed technology
- In-house engineering team — every unit is specified to your gas composition, not selected off a shelf
- Annual production capacity of ~2,000 sets, with full QC documentation (material certs, dimensional inspection, pressure test, performance verification)
- ISO 9001 & SGS certified; proven track record across India, Saudi Arabia, Southeast Asia and major domestic EPC projects
- Fast lead times and remote commissioning support for overseas customers

统一社会信用代码
91410721MAK5DBH074

营业执照

(副本) (1-1)

扫描二维码登录"国家企业信用信息公示系统"了解更多登记、备案、许可、监管信息。

名　　称　河南菲滤特环保科技有限公司

类　　型　有限责任公司(自然人投资或控股)

法定代表人　王浩

经营范围　一般项目：新材料技术推广服务；技术服务、技术开发、技术咨询、技术交流、技术转让、技术推广；环境保护专用设备制造；环境保护专用设备销售；气体、液体分离及纯净设备制造；气体、液体分离及纯净设备销售；液压动力机械及元件制造；液压动力机械及元件销售；机械设备研发；机械设备销售；生态环境材料销售；玻璃纤维及制品销售；泵及真空设备销售；金属制品销售；货物进出口；技术进出口（除依法须经批准的项目外，凭营业执照依法自主开展经营活动）

注册资本　壹佰万圆整

成立日期　2025年12月26日

住　　所　河南省新乡市新乡县翟坡镇杨仁旺村黄河大道271号3楼308室

登记机关

2025 年 12 月 26 日

国家企业信用信息公示系统网址：http://www.gsxt.gov.cn　　市场主体应当于每年1月1日至6月30日通过国家企业信用信息公示系统报送公示年度报告　　国家市场监督管理总局监制

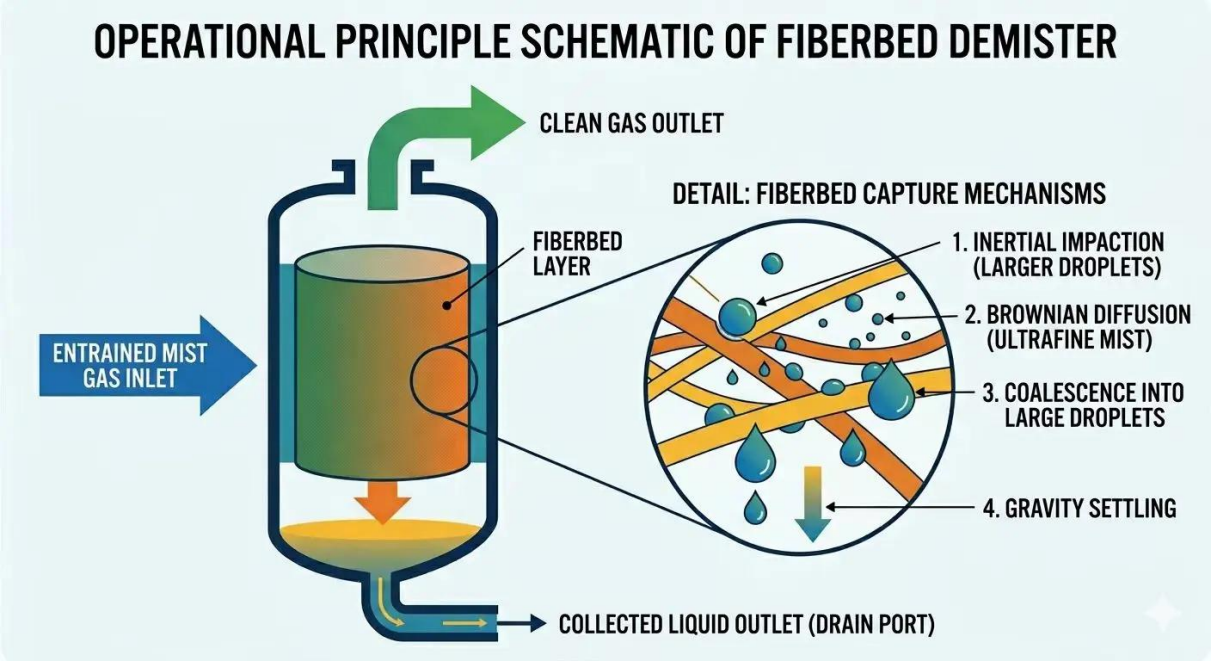
Business License — Henan Filtearth Environmental Protection Technology Co., Ltd.

Core Product: Fiber Bed Mist Eliminator

The Filtearth Fiber Bed Mist Eliminator — also known in industry as a Candle Filter or Fiber Demister — is a highly efficient industrial purification device specifically designed to remove extremely fine droplets, submicron aerosols (droplet diameter below 1 micrometer) and soluble solid particles from process gas streams.

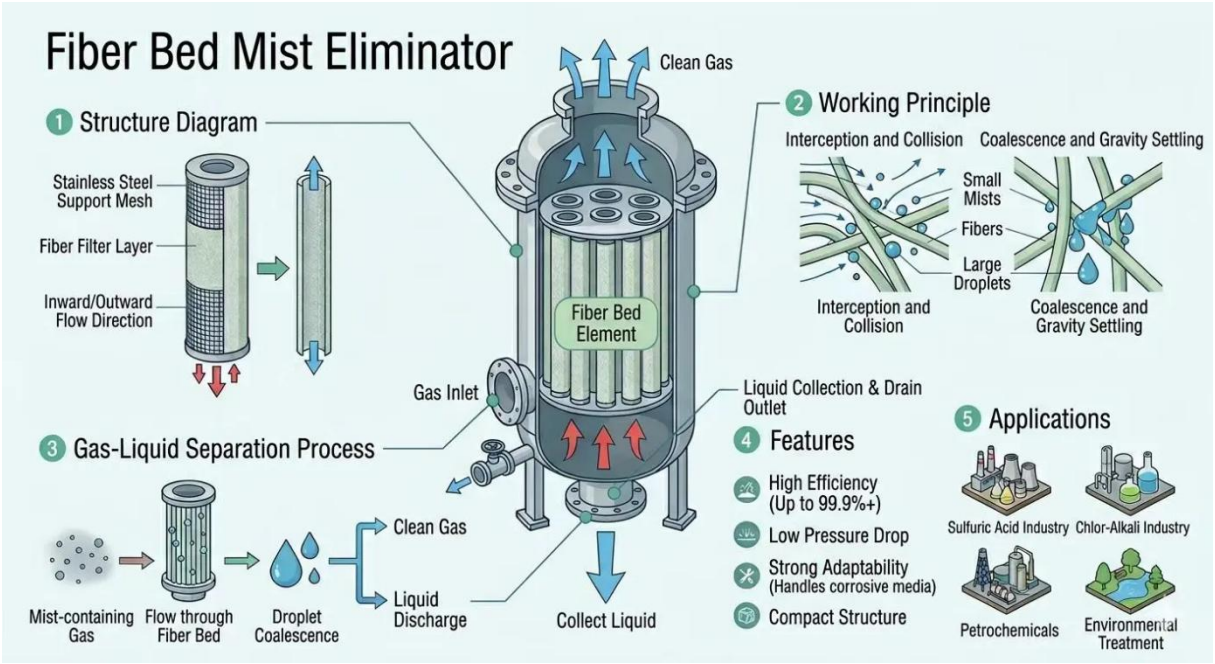
Compared with ordinary wire-mesh or baffle-type demisters, its key advantage lies in capturing submicron particles that behave like smoke and are extremely difficult to separate by other means.

Working Principle & Capture Mechanisms



- Inertial Impaction — effective for larger droplets (> 3 μm); particles cannot follow the bending streamline and collide directly with the fiber
- Direct Interception — effective for medium-sized particles (1–3 μm) that contact the fiber surface as they travel along the gas streamline
- Brownian Diffusion — effective for ultrafine submicron particles (< 1 μm); random molecular bombardment greatly increases collision probability with fibers — the core mechanism behind near-100% capture of ultrafine droplets

- Self-Cleaning Drainage — captured droplets coalesce into a liquid film on the fiber surface and flow downward by gravity to be discharged, giving the bed a simultaneous "capture-and-drain" capability



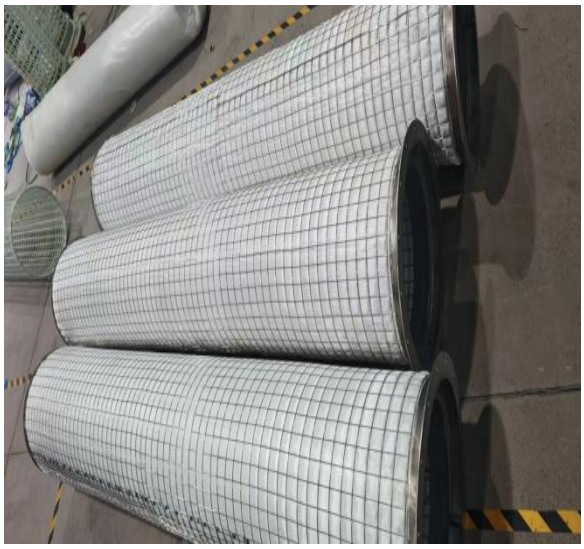
Fiber bed structure, gas-liquid separation flow and typical industry applications.

Construction

Filtearth fiber bed mist eliminators are cylindrical elements (resembling a giant candle) consisting of:

- Concentric inner and outer mesh cylinders (support cages) — corrosion-resistant metals (stainless steel, titanium alloy) or plastics (FRP, PP, PTFE) providing mechanical support
- Compressed fiber bed (core layer) — filled between the inner and outer mesh cylinders; common materials include special glass fiber, polypropylene (PP), PTFE and ceramic fiber
- Drainage layer — an additional coarse-fiber layer on the gas outlet side to quickly drain accumulated liquid and prevent secondary re-entrainment
- Mounting flanges and base — fix the element to the tower tube sheet and ensure gas-tight sealing

Product Gallery



Left: assembled wire-cage fiber bed elements ready for shipment. Right: internal view of the support cage and fiber media.

Left: finished fiber bed elements (top view) in production. Right: tube-sheet mounting layout for tower installation.

Industries Served

Every industry has unique mist characteristics, gas compositions and corrosion requirements. Our fiber bed eliminators are specified — not selected off a shelf.

Sulfuric Acid Industry

Eliminates sulfuric acid mist from drying towers, absorption towers and tail gas scrubbing systems. Critical for emission compliance and acid recovery.

- Highly corrosive duty — PTFE / glass fiber construction
- High-concentration acid mist < 3 μm
- High gas velocity tolerance

Chlor-Alkali Industry

Removes caustic mist and chlorine-laden droplets from electrolysis off-gas, evaporators and drying systems, protecting downstream equipment from corrosion.

- Cl_2 & NaOH dual-environment resistance
- Electrolytic cell off-gas handling
- Continuous operation requirements

Polysilicon Industry

Captures $SiCl_4$ and HCl mist from reduction furnace exhaust and tail gas recovery systems. Essential for product purity and process efficiency.

- Ultra-high purity requirements
- Mixed silicon chloride compounds
- High temperature gas streams

Semiconductor Industry

Sub-micron mist elimination from wet etch exhaust, acid vapor scrubbers and cleanroom exhaust systems. Zero contamination tolerance.

- Sub-0.3 μm particle capture
- HF, HCl, H_2SO_4 mixed vapors

- Cleanroom-compatible materials

Phosphoric Acid Industry

Handles phosphoric acid mist and fluoride-laden gas from reactors, concentrators and evaporators. Prevents product loss and protects the environment.

- H_3 PO_4 + HF combined attack
- High solids content in gas stream
- Environmental emission compliance

Petrochemical Industry

Hydrocarbon mist and amine droplet separation from gas-liquid contactors, absorbers and amine regeneration units. Maximizes gas quality and recovers valuable product.

- Hydrocarbon & amine service
- High pressure vessel integration
- API & ASME standards compliance

Filtearth mist elimination systems installed in operating sulfuric acid / petrochemical plants.

Key Advantages

- Superior collection efficiency — nearly 100% for droplets > 1 μm; 99.5%–99.99% for submicron acid mist
- Extremely long service life — no moving parts; under suitable operating conditions a single fiber bed can last years to decades
- Stable pressure drop — self-cleaning and drainage maintain consistent performance over long-term operation
- Elimination of visible plume — removes “blue smoke” / “white smoke”, helping plants meet strict emission standards

Customizable Technical Parameters

Fiber Material	Glass Fiber / PTFE / PP
Fiber Diameter	3 – 25 μm
Bed Thickness	25 – 200 mm
Packing Density	3% – 15%
Element Diameter	100 – 1000 mm
Shell Material	PP / FRP / SS316L / Titanium
Connection Standard	ANSI / DIN / JIS / Custom
Certifications	ISO / SGS

Droplet Removal Range	0.1 – 3 μm
Mist Removal Efficiency	> 99.99%
Operating Temperature	-20°C ~ 260°C
Pressure Drop	50 – 2000 Pa

Custom Engineering & OEM Process

We support full OEM manufacturing for system integrators and EPC contractors across the Middle East and Southeast Asia.

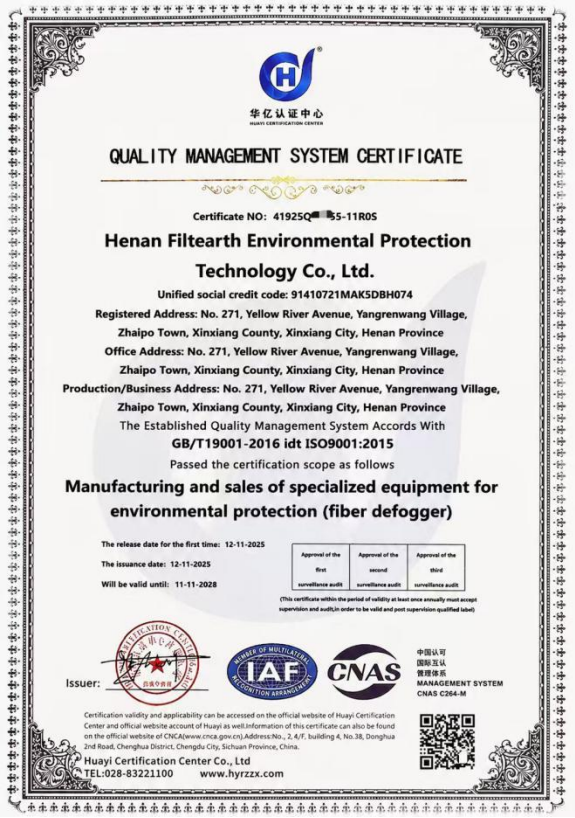
- Step 1 — Submit Process Data: gas composition, temperature, pressure, flow rate and droplet characteristics (data sheet template available on request)
- Step 2 — Engineering Review: our engineers select fiber grade, packing density, bed thickness and shell material optimized for your media and operating conditions
- Step 3 — Fabrication & QC: production with full quality documentation — material certs, dimensional inspection, pressure test reports and performance verification
- Step 4 — Delivery & Commissioning Support: on-time delivery with complete documentation; remote commissioning guidance available for all markets

Maintenance Guidelines

- Monitor pressure drop daily via inlet/outlet differential pressure gauges; watch for sharp increases indicating blockage
- Cleaning & regeneration: water/solvent flushing, chemical cleaning, or steam/inert gas purging depending on deposit type
- Structural inspection: check seals/gaskets, fiber media condition, support frame and housing for corrosion during shutdowns
- Operating condition management: control inlet gas velocity within design range; prevent crystallization by maintaining gas temperature above dew point
- Replacement: replace the element when cleaning no longer restores pressure drop, or when fiber media is chemically/physically degraded

Certifications & Customer Feedback

- ISO 9001 Quality Management System Certification (Certificate No. 41925Q… — GB/T19001-2016 idt ISO9001:2015, valid through 11-11-2028)
- SGS Verification



华亿认证中心
HUAYI CERTIFICATION CENTER

QUALITY MANAGEMENT SYSTEM CERTIFICATE

Certificate NO: 41925Q[redacted]5-11R0S

Henan Filtearth Environmental Protection Technology Co., Ltd.

Unified social credit code: 91410721MAK5DBH074

Registered Address: No. 271, Yellow River Avenue, Yangrenwang Village, Zhaipo Town, Xinxiang County, Xinxiang City, Henan Province

Office Address: No. 271, Yellow River Avenue, Yangrenwang Village, Zhaipo Town, Xinxiang County, Xinxiang City, Henan Province

Production/Business Address: No. 271, Yellow River Avenue, Yangrenwang Village, Zhaipo Town, Xinxiang County, Xinxiang City, Henan Province

The Established Quality Management System Accords With

GB/T19001-2016 idt ISO9001:2015

Passed the certification scope as follows

Manufacturing and sales of specialized equipment for environmental protection (fiber defogger)

The release date for the first time: 12-11-2025

The issuance date: 12-11-2025

Will be valid until: 11-11-2028

Approval of the first surveillance audit	Approval of the second surveillance audit	Approval of the third surveillance audit

(This certificate within the period of validity at least once annually must accept supervision and audit,in order to be valid and post supervision qualified label)

Issuer:

IAF CNAS

中国认可
国际互认
管理体系
MANAGEMENT SYSTEM
CNAS C264-M

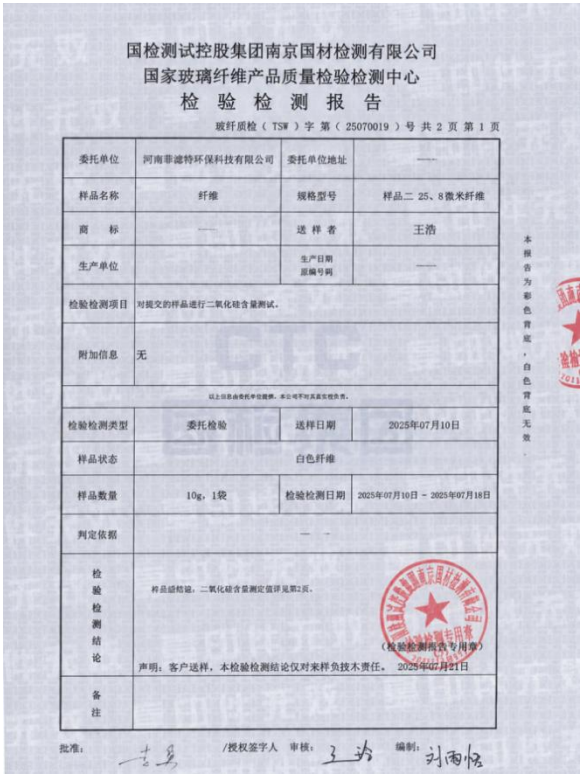
Certification validity and applicability can be accessed on the official website of Huayi Certification Center and official website account of Huayi as well.Information of this certificate can also be found on the official website of CNCA(www.cnca.gov.cn).Address:No., 2, 4/F, building 4, No.38, Donghua 2nd Road, Chenghua District, Chengdu City, Sichuan Province, China.

Huayi Certification Center Co., Ltd
TEL:028-83221100 www.hyrzzx.com

ISO 9001:2015 Quality Management System Certificate — Henan Filtearth Environmental Protection Technology Co., Ltd.

Third-Party Fiber Material Testing

To guarantee fiber media quality and consistency, raw fiber samples are independently tested by CTC (China Certification & Testing Group) — Nanjing Guocai Testing Co., Ltd., National Glass Fiber Product Quality Inspection & Testing Center. The example report below verifies the SiO_2 / ZrO_2 composition of an 8 μm fiber sample (Test Report No. 玻纖质检(TSW)字第(25070019)号), commissioned by Henan Filtearth Environmental Protection Technology Co., Ltd.



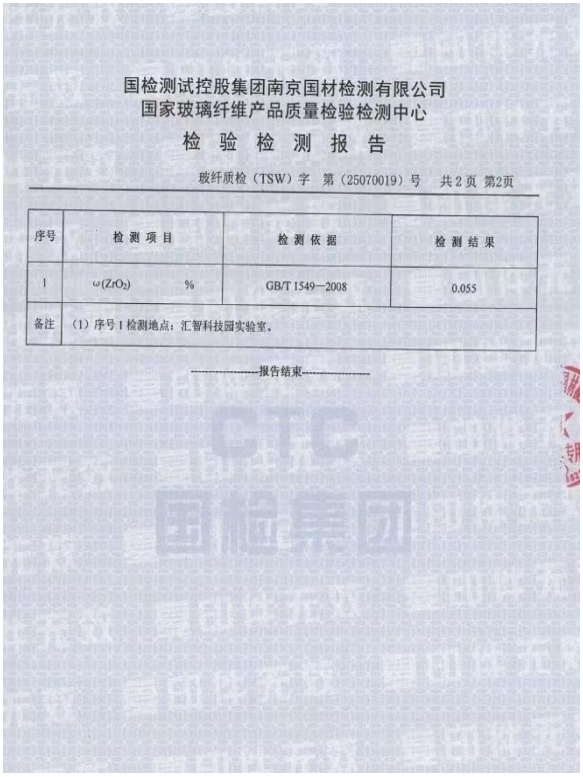
国检测试控股集团南京国材检测有限公司
国家玻璃纤维产品质量检验检测中心
检 验 检 测 报 告

玻纤质检（TSW）字 第（25070019）号 共 2 页 第 1 页

委托单位	河南菲滤特环保科技有限公司	委托单位地址	——
样品名称	纤维	规格型号	样品二 25、8微米纤维
商 标	——	送 样 者	王浩
生产单位		生产日期/原编号码	——
检验检测项目	对提交的样品进行二氧化硅含量测试。		
附加信息	无		
以上信息由委托单位提供，本公司不对其真实性负责。			
检验检测类型	委托检验	送样日期	2025年07月10日
样品状态	白色纤维		
样品数量	10g，1袋	检验检测日期	2025年07月10日 - 2025年07月18日
判定依据	——		
检验检测结论	样品检验，二氧化硅含量测定值详见第2页。 （检验检测报告专用章） 声明：客户送样，本检验检测结论仅对来样负技术责任。 2025年07月21日		
备注			

批准： /授权签字人 审核： 编制：

本报告为彩色背底，白色背底无效。



国检测试控股集团南京国材检测有限公司
国家玻璃纤维产品质量检验检测中心
检 验 检 测 报 告

玻纤质检（TSW）字 第（25070019）号 共 2 页 第2页

序号	检测项目	检测依据	检测结果
1	$\omega(ZrO_2)$ %	GB/T 1549—2008	0.055
备注	（1）序号 1 检测地点：汇智科技园实验室。		

----------报告结束----------

CTC National Glass Fiber Testing Center — Inspection & Testing Report verifying fiber chemical composition (sample: 25 / 8 μm fiber).

"We have been using this equipment at our sulfuric acid plant for two years. We are highly satisfied with it, thanks to its high efficiency and extremely low maintenance costs." — Factory Director, sulfuric acid plant, India

"The PP shell units are highly resistant to the acidic conditions in our fertilizer plant. Outlet mist concentration dropped below 8 mg/m³, meeting our emission standards easily." — Plant Director, fertilizer plant, Saudi Arabia

"The fiber bed mist eliminators were customized to fit our existing vessel. Installation was smooth and performance on our amine scrubber has been outstanding since day one." — Senior Process Engineer, EPC Contractor

Contact Us

Fill out an inquiry form or reach us directly — we typically respond within a few hours.

Company	Henan Filtearth Environmental Protection Technology Co., Ltd.
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Phone / WhatsApp	+86 159 3651 0880
Email	overseas@filtearth.com
Website	www.filtearth.com

Request a Sample

We work closely with our clients to provide engineering and product design innovations that transform your product concepts into reality.

Tailor our technology to your specific application to bring your next product to life. Simply select the features, technologies, and industries relevant to your needs—along with the specific functionalities you envision—and we will send you a list of relevant capabilities for further discussion.

There are no strict minimum order quantity restrictions. Whether it is a sporadic order requiring the replacement of just a single fiber bed demister, or a bulk order involving an entire project, we are fully capable of handling it.