



ULTRASONIC CLEANING

超声清洗

专业超声波清洗解决方案专家

Expert in Professional Ultrasonic Cleaning Solutions

BDX-L / BDX-M / BDX-C / BDX-R / BDX-E / BDX-SM / BDX-AS / BDX-AM / BDX-VH

张家港市保德兴超声设备有限公司

ZHANGJIAGANG BAODEXING ULTRASONIC CO., LTD.

www.baodexing.net

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合作共赢 · 品质至上

Win-Win Cooperation · Quality First

www.baodexing.net

品牌简介与工厂实力

Brand Profile & Factory Strength

保德兴超声设备——技术驱动清洗解决方案专家，以十余年专注研发与制造积淀，为全球工业客户提供高效、可靠的超声波清洗设备与定制化解决方案。

BDX Ultrasonic — a technology-driven cleaning solution expert, delivering efficient and reliable ultrasonic cleaning equipment and customized solutions to industrial clients worldwide.

2012

成立年份 Founded

18

核心专利 Patents

9

产品系列 Series

7×24

服务响应 Support



十年积淀，行业技术领跑者

A Decade of Industry Leadership

2012年成立于江苏张家港，专注超声波清洗设备研发与生产，凭借现代化厂房与资深研发团队，快速成长为行业领先的技术型创新企业。

Founded in Zhangjiagang, Jiangsu in 2012, we specialize in the R&D and manufacturing of ultrasonic cleaning equipment. Equipped with modern production facilities and an experienced R&D team, we have rapidly grown into a leading technology-driven innovative enterprise in the industry.



定制为本，全流程闭环服务

Customization-Driven, Closed-Loop Service

不仅是设备制造商，更是客户的合作伙伴。构建从研发设计、精密制造到售后维护的完整技术闭环，坚持以客户需求为导向，提供针对性的清洗解决方案。

We are more than an equipment manufacturer — we are your reliable partner. We build a complete technical closed loop covering R&D, design, precision manufacturing and after-sales maintenance. Customer-oriented in every step, we provide customized cleaning solutions tailored to your needs.



广泛覆盖，赋能高精尖产业

Wide Coverage for High-Precision Industries

产品覆盖标准机型与非标定制，广泛应用于电子、航空航天、医疗器械、半导体、汽车制造及光伏等领域，为各行业客户提升生产效率与产品品质。

We offer both standard models and non-standard customized equipment. Our products are widely applied in electronics, aerospace, medical devices, semiconductors, automotive manufacturing and photovoltaics, helping customers across industries improve production efficiency and product quality.



现代化的生产基地与严谨的品质管控体系，为每一台设备的稳定运行保驾护航。

Modern production facilities and a rigorous quality control system safeguard the stable operation of every machine.

QUALITY & HONORS

国际认证与荣誉

Certifications & Honors

保德兴的卓越品质与创新能力获得权威机构的广泛认可——这不仅是一份荣誉，更是对每一位客户的郑重承诺，彰显了我们在技术研发与品质管理上的硬核实力。

BDX's exceptional quality and innovation are widely recognized by authoritative institutions — an honor, and a solemn commitment to every customer.



ISO9001 质量体系认证

ISO9001 Quality Management System Certification

严格遵循国际质量管理标准，实施全流程精细化管控。从研发设计到生产交付，每一个环节都有据可依，确保产品性能稳定、品质卓越，达到国际先进水平。

Full-process refined management in strict accordance with international quality standards — every step from R&D to delivery is documented, ensuring stable performance and world-class quality.



18 项核心技术专利加持

18 Core Technology Patents

累计取得 18 件知识产权专利，覆盖超声波清洗的核心电路、机械结构与应用工艺。这不仅是技术壁垒的构建，更是我们持续创新、引领行业技术发展的实证。

18 granted intellectual-property patents covering core circuits, mechanical structures and application processes of ultrasonic cleaning — a barrier of technology, and proof of our continuous innovation.



国家高新技术企业 · AAA 级信用

National High-Tech Enterprise & AAA Credit Enterprise

获“国家高新技术企业”认定，彰显硬核研发实力；荣获“AAA 级信用企业”称号，印证诚信经营的商业信誉。品质与信誉并重，是您值得信赖的合作伙伴。

Recognized as a National High-Tech Enterprise for R&D strength and awarded AAA Credit Enterprise for business integrity — quality and credibility in one, a partner you can trust.

以国际质量管理标准为基准，品质与信誉并重——保德兴值得全球客户信赖。

Built on international quality standards, with quality and credibility in one — BDX is a partner trusted by clients worldwide.

核心技术优势

Core Technology Advantages

以四大核心技术平台，覆盖从基础清洗到高端精密清洗的全场景需求，为全球制造企业提供面向未来的清洗技术。

Four core technology platforms covering every scenario from basic cleaning to high-end precision cleaning.



超声空化技术

Ultrasonic Cavitation Technology

高频超声在清洗液中产生微小气泡，爆破瞬间释放强劲能量，深入缝隙与盲孔剥离顽固污垢，实现无死角精密清洗。

High-frequency ultrasound produces microbubbles in cleaning fluid. Their instantaneous collapse releases intense energy, removing tough dirt from slits and blind holes for thorough, dead-space-free precision cleaning.



电解复合清洗技术

Electrolytic Composite Cleaning

电化学分解与超声空化双重作用，无需拆解即可瓦解模具积碳、硫化物等深层顽固污渍，清洗过程不损伤基材精度。

Dual effects of electrochemical decomposition and ultrasonic cavitation break down deep stubborn contaminants such as mold carbon deposits and sulfides without disassembly, and the cleaning process will not damage the precision of the base material.



真空碳氢清洗技术

Vacuum Hydrocarbon Cleaning

真空低氧环境配合环保碳氢溶剂，深入工件微孔与盲孔彻底除油去污，真空负压干燥无残留，从源头杜绝易燃易爆风险。

Adopting a vacuum low-oxygen environment together with eco-friendly hydrocarbon solvent, the system thoroughly degreases and removes contaminants deep inside micro-pores and blind holes of workpieces. Vacuum negative pressure drying leaves no residue and eliminates flammable and explosive risks fundamentally.



智能自动化控制

Intelligent Automation Control

PLC 智能触控系统支持多段工艺存储与一键调用，机械臂自动上下料，温度、液位、电流实时监控，实现全流程无人化闭环生产。

The PLC intelligent touch control system supports multi-stage process storage and one-click recall. Equipped with robotic arm automatic loading and unloading, it conducts real-time monitoring of temperature, liquid level and current to realize fully automatic closed-loop unattended production.

4 大技术平台 Technology Platforms

18 项核心专利 Core Patents

9 大产品系列 Product Series

全系列产品矩阵

Full Product Matrix

保德兴构建了覆盖全场景的九大核心产品系列，从基础型单槽设备到高度自动化的真空碳氢清洗系统，精准匹配精密制造、汽车、电子等行业的多样化清洗需求。

Nine core series covering every scenario — from basic single-tank units to fully-automatic vacuum hydrocarbon systems.

BDX-L 单槽式清洗机 Single-Tank Ultrasonic Cleaner 经济实用的基础机型，专为实验室小样处理及小批量标准工件清洗设计，操作简便，维护成本低。 Cost-effective basic unit for lab sample treatment & small batch parts cleaning, easy operation with low maintenance expenditure. 详见 P.07 →	BDX-M 多槽式清洗机 Multi-Tank Ultrasonic Cleaner 集成清洗、漂洗、烘干等多工序，实现一站式处理，有效提升复杂精密工件的洁净度与一致性。 Integrating multiple processes including cleaning, rinsing and drying, it enables one-stop processing and effectively improves the cleanliness and consistency of complex and precision workpieces. 详见 P.08 →	BDX-C 链式通过式清洗机 Chain Conveyor Cleaning Line 流水线式连续作业设计，适配大批量生产场景，实现从进料到出料的全自动化连续清洗。 Adopting a pipeline continuous operation design, it adapts to high-volume production scenarios and realizes fully automatic continuous cleaning from feeding to discharging. 详见 P.09 →
BDX-R 旋转喷淋式清洗机 Rotary Spray Ultrasonic Cleaner 结合超声波与高压喷淋，配合工件旋转，针对深孔、盲孔及异形件实现无死角清洗。 Ultrasonic + high-pressure spraying + workpiece rotary design, full blind/deep hole & irregular parts dead-space-free cleaning. 详见 P.10 →	BDX-E 电解超声波清洗机 Electrolytic Ultrasonic Cleaner 利用电解效应分解顽固油污与氧化物，特别适合精密模具、冲压件等重油污工件的清洗。 Electrolytic decomposition removes tough grease and oxides, ideal for heavy-oil precision molds and stampings. 详见 P.11 →	BDX-SM 半自动多槽清洗机 Semi-Auto Multi-Tank Cleaner 人机协作的柔性方案，平衡自动化效率与生产灵活性，满足多品种小批量的清洗需求。 Flexible human-machine collaboration solution balances automatic efficiency and production flexibility, meeting cleaning requirements for multi-variety and small-batch production. 详见 P.12 →
BDX-AS 全自动单臂清洗机 Auto Single-Arm Cleaner 单机械臂自动上下料，全流程闭环控制，运行稳定可靠，有效降低人工成本与误操作。 Single robotic arm completes automatic loading and unloading with full-process closed-loop control. The equipment operates stably and reliably, effectively cutting labor costs and avoiding manual misoperation. 详见 P.13 →	BDX-AM 全自动多臂清洗机 Auto Multi-Arm Cleaner 多机械臂协同作业，并行处理多工位工序，大幅提升单位时间产能，适用于规模化生产。 Multiple robotic arms work in synergy to carry out parallel multi-station processes, greatly boosting output per unit time and suiting large-scale mass production. 详见 P.14 →	BDX-VH 真空碳氢清洗机 Vacuum Hydrocarbon Cleaner 真空环境下的高效清洗技术，配合碳氢溶剂，实现高洁净度、低能耗与环保排放的完美平衡。 Vacuum high-efficiency cleaning with hydrocarbon solvent, balanced high cleanliness, low power consumption and environmental discharge standard. 详见 P.15 →

BDX-L

单槽式超声波清洗机

Single-Tank Ultrasonic Cleaning Machine

实验室与小型车间首选



实验室与小型车间的理想之选

The Ideal Choice for Laboratories and Small Workshops

一体化紧凑设计，操作界面直观简便，无需专业培训即可上手。其广泛的适用性使其成为科研实验室、精密加工车间及单件小批量清洗场景的首选设备，完美平衡清洁效率与维护便捷性。

Compact integrated design with an intuitive interface — no professional training required. The preferred choice for research labs, precision workshops and small-batch cleaning, balancing cleaning efficiency with easy maintenance.

核心亮点

KEY FEATURES

一体化设计，操作极简

Integrated Design, Easy Operation

紧凑机身节省空间，一键启动面板设计，日常维护简单。
Compact body with one-button start panel for easy maintenance.

SUS304 不锈钢槽体

SUS304 Stainless Steel Tank

加厚食品级不锈钢材质，抗腐蚀耐酸碱，槽体坚固不变形。
Thickened food-grade stainless steel, corrosion and acid resistant.

强劲超声，清洗均匀

Powerful & Even Ultrasonics

高稳定性工业换能器阵列，能量分布均匀，清洗无死角。
Industrial transducer array with even energy distribution.

精准温控 30–110°C

Precise Temperature Control

智能恒温控制系统，温度调节精度高，满足最佳清洗温度。
Intelligent constant-temperature system with high accuracy.

功能模块按需选配

Optional Function Modules

支持循环过滤、油水分离、抛动清洗等升级配置。
Optional filtration, oil-water separation and agitation modules.

底振/侧振 灵活安装

Bottom / Side Vibration Options

提供底部振动与侧面振动两种安装方式，适应不同槽体。
Two mounting options for different tank sizes and needs.

特性参数

SPECIFICATIONS

温控范围 Temp. Range

30–110°C 智能恒温 Smart Temperature Control

槽体材质 Tank Material

SUS304 不锈钢 Stainless Steel

功率与尺寸 Power & Dimensions

按需定制 Customized on Request

适用场景：科研实验室、精密加工车间、单件小批量清洗

Applications: Labs · Precision Workshops · Small-Batch Cleaning

BDX-M

多槽式超声波清洗机

Multi-Tank Ultrasonic Cleaning Machine

一站式分级净化



粗洗 · 精洗 · 漂洗 · 干燥，一站式处理

One-Stop Process: Washing, Rinsing & Drying

整机采用 SUS304 不锈钢材质，结构稳固，外观整洁。多槽独立分隔设计，通过“分级净化”流程有效隔离不同清洗阶段的水质，彻底杜绝交叉污染，确保工件达到精密级洁净度标准。

Built entirely of SUS304 stainless steel with independent multi-tank separation. The graded-purification process isolates water quality at each stage, eliminating cross-contamination for precision-grade cleanliness.

核心亮点

KEY FEATURES

全不锈钢精工制造

Full Stainless Steel Construction

内外通体不锈钢材质，耐腐蚀易清洁，结构紧凑美观。
Stainless steel inside and out — corrosion-resistant, compact, easy to clean.

多重智能安全防护

Multiple Intelligent Safeguards

高精度液位控制与过热保护系统，实时监测运行状态。
High-precision level control and overheat protection in real time.

独立循环过滤系统

Independent Circulating Filtration

独立储液槽配合精密过滤器，持续净化清洗液，降低耗材成本。
Independent reservoir with precision filter keeps the bath clean.

宽幅智能温控调节

Wide-Range Intelligent Temperature Control

30°C–110°C 宽范围精准控温，满足普通清洗到高温脱脂需求。
30–110°C precise control from general cleaning to high-temp degreasing.

绿色环保清洗工艺

Eco-Friendly Cleaning Process

以水基溶剂为介质，无毒无味无污染，清洗成本低廉。
Water-based media — non-toxic, odorless, pollution-free and low-cost.

高效溢流除油设计

Efficient Overflow Oil Removal

独特锯齿形溢水口，快速撇除液面浮油与杂质，防止二次污染。
Serrated overflow quickly removes floating oil and prevents recontamination.

特性参数

SPECIFICATIONS

温控范围 Temp. Range

30–110°C 智能恒温 Smart Temperature Control

槽体材质 Tank Material

SUS304 不锈钢 Stainless Steel

功率与尺寸 Power & Dimensions

按需定制 Customized on Request

适用场景：精密五金、电子器件的高标准清洗

Applications: Precision Hardware • Electronic Components

BDX-C

大批量连续生产

链式通过式超声波清洗机

Chain Conveyor Ultrasonic Cleaning Line



从进料到出料，全流程无人化

Fully Automatic from Feeding to Discharge

专为大批量工件连续清洗设计的自动化流水线设备，实现从进料到出料的全流程无人化操作，有效解决传统清洗效率低、人工成本高的痛点。

An automatic in-line system for continuous cleaning of high-volume workpieces — unmanned operation from feeding to discharge, solving the low efficiency and high labor cost of traditional cleaning.

核心亮点 KEY FEATURES

全自动连续生产 Fully Automatic Continuous Production

不锈钢网带输送，全程无人化作业，清洗效率提升 50% 以上。
Stainless mesh-belt conveying — over 50% higher cleaning efficiency.

船形结构槽体 Boat-Shaped Tank Design

流线型设计便于排污和彻底清扫，减少污垢残留，维护便捷。
Streamlined design for easy drainage and thorough cleaning.

智能 PLC 控制系统 Intelligent PLC Control System

支持手动/自动双模式，触控屏操作界面，运行参数可视可调。
Manual/auto modes with touch-screen interface and visual parameters.

完善的辅助系统 Complete Auxiliary Systems

集成储液、过滤、恒温加热及液位保护，变频调速灵活适配。
Integrated reservoir, filtration, heating and level protection with VFD speed control.

封闭式环保设计 Enclosed Eco-Friendly Design

防止雾气与噪音外溢，改善车间环境，符合绿色生产标准。
Enclosed design prevents mist and noise for a greener workshop.



批量清洗产线现场 Batch Cleaning Line in Operation

特性参数 SPECIFICATIONS

控制方式 Control Method

PLC 触控屏 PLC Touch Screen

输送方式 Delivery Method

不锈钢网带 Stainless Mesh Belt

功率与尺寸 Power & Dimensions

按需定制 Customized on Request

适用场景：汽车发动机零部件、轴承、五金冲压件、精密机械零件等批量清洗

Applications: Auto Parts · Bearings · Stampings

BDX-R

深孔盲孔无死角清洗

旋转喷淋式超声波清洗机

Rotary Spray Ultrasonic Cleaning Machine



超声空化 + 360° 旋转高压喷淋

Ultrasonic Cavitation + 360° Rotary High-Pressure Spray

专为结构复杂、内腔精密的工件设计。超声波产生的微小气泡爆破时释放巨大能量，剥离工件表面及缝隙中的顽固污垢；配合全方位旋转喷淋，实现对复杂内腔的强力冲洗，确保清洁无死角。

Designed for workpieces with complex structures and precision cavities. Cavitation bubbles blast stubborn contamination from surfaces and crevices, while rotary spray flushes inner cavities — no dead corners.

核心亮点

KEY FEATURES

双效协同 深度洁净

Dual-Action Deep Cleaning

超声剥离微观污垢，旋转喷淋冲洗杂质，内外兼修。
Ultrasonics lifts micro-contamination while spray flushes residues.

全维可调 精准控温

Fully Adjustable Parameters

转速、压力、超声功率及清洗温度均可独立调节。
Rotation speed, pressure, power and temperature fully adjustable.

独立管路 杜绝污染

Independent Pipelines, No Cross-Contamination

各清洗工位独立管路设计，彻底避免药液交叉污染。
Independent pipelines at each station eliminate cross-contamination.

循环过滤 节能降耗

Circulating Filtration, Energy Saving

多级过滤循环利用清洗液，密闭腔体减少热量散失。
Multi-stage filtration recycles the bath; sealed chamber saves energy.

智能交互 工艺存储

Smart HMI with Recipe Storage

PLC 智能触控系统，一键切换与存储多套清洗程序。
PLC touch system stores and recalls multiple cleaning programs.

灵活定制 产线对接

Flexible Customization & Line Integration

支持多工位扩展与非标定制，可无缝对接自动化生产线。
Multi-station expansion and custom builds integrate with auto lines.

特性参数

SPECIFICATIONS

工艺参数 Process Parameters

转速·压力·功率·温度 全维可调 Fully Adjustable: Rotation Speed, Pressure, Power and Temperature

控制方式 Control Method

PLC 触控 · 多套工艺存储 PLC Touch Control · Multiple Process Programs Storage

功率与尺寸 Power & Dimensions

按需定制 Customized on Request

适用场景：深孔、盲孔及异形件等复杂结构工件的精密清洗

Applications: Deep/Blind Holes · Irregular Complex Parts

BDX-E

精密模具顽固污渍克星

电解超声波清洗机

Electrolytic Ultrasonic Cleaning Machine



电化学 × 超声空化，双效合一

Electrolysis × Ultrasonic Cavitation in One

专为解决精密模具表面的积碳、硫化物等顽固污渍研发，通过电化学分解与超声波空化的双重作用实现深层清洁，是保障模具精度、延长使用寿命的高效清洗解决方案。

Developed for stubborn carbon and sulfide deposits on precision molds. The dual action of electrochemical decomposition and ultrasonic cavitation delivers deep cleaning that preserves mold accuracy and extends service life.

核心亮点 KEY FEATURES

⚡ 双效复合清洗

Dual-Effect Composite Cleaning

电化学分解与超声空化渗透相结合，快速瓦解深层污垢。
Electrolysis plus cavitation quickly breaks down deep contamination.

✅ 无损保护精度

Non-Destructive Precision Care

无需拆解模具，清洗过程不损伤基材，保持原有尺寸公差。
No disassembly needed — substrates and tolerances stay intact.

🛡️ 智能防腐蚀

Intelligent Anti-Corrosion

智能系统自动匹配最佳清洗参数，防过腐蚀保护，确保工件安全。
Auto parameter matching with anti-corrosion protection.

💧 绿色环保 无毒无害

Eco-Friendly & Non-Toxic

采用水基电解溶液，替代传统有毒有机溶剂，清洁无污染。
Water-based electrolyte replaces toxic organic solvents.

🔄 循环过滤 降本增效

Circulating Filtration

实时过滤清洗杂质，延长电解液寿命，降低使用成本。
Real-time filtration extends electrolyte life and cuts cost.

⚙️ 精密模具适配

Precision Mold Compatibility

专为注塑、压铸模具设计，去除色粉残留、油污及氧化层。
Built for injection/die-casting molds — removes pigment, oil and oxides.

特性参数 SPECIFICATIONS

清洗介质 Cleaning Medium

水基电解溶液 Water-Based Electrolyte

控制方式 Control Method

智能参数匹配 Auto Parameter Matching

功率与尺寸 Power & Dimensions

按需定制 Customized on Request

适用场景：精密模具、冲压件等重油污工件的清洗

Applications: Precision Molds • Heavy-Oil Stampings

BDX-SM

多品种小批量柔性方案

半自动多槽超声波清洗机

Semi-Automatic Multi-Tank Ultrasonic Cleaning Machine



人机协作，柔性高效的精密清洗

Flexible Man-Machine Collaboration

模块化设计的半自动清洗设备，通过人工或电动葫芦转运工件，有效规避交叉污染风险。在保障清洗质量的同时，兼顾了设备的投资成本与生产操作的灵活性，是中小批量精密清洗的理想选择。

A semi-automatic modular system transferring workpieces manually or by electric hoist to eliminate cross-contamination — balancing cleaning quality, investment cost and flexibility for small-to-medium batches.

核心亮点

KEY FEATURES

分级净化 洁净度高

Graded Purification, High Cleanliness

各清洗槽独立承担单一工序，物理隔离防止二次污染。
Each tank handles one process — physical isolation prevents recontamination.

柔性生产 适应性强

Flexible Production

人工与半自动转运模式灵活切换，快速响应生产计划变更。
Switch freely between manual and semi-auto transfer modes.

精准调控 独立参数

Independent Parameter Control

单槽独立控制系统，超声功率、温度及时间均可单独设定。
Each tank sets its own power, temperature and time.

模块组合 按需定制

Modular Combination, Custom-Built

槽体数量与功能模块自由组合，灵活配置设备结构。
Freely combine tank count and function modules to fit your process.

功能可拓展

Extendable Functions

支持加装循环过滤、工件抛动装置、鼓泡清洗等辅助功能。
Optional filtration, workpiece agitation and bubble cleaning modules.

多品种 · 小批量

The Ideal Choice for Multi-Variety, Small-Batch Precision Cleaning

特性参数

SPECIFICATIONS

控制方式 Control Method

单槽独立控制 Individual Tank Control

槽体配置 Tank Configuration

模块化自由组合 Modular Free Combination

功率与尺寸 Power & Dimensions

按需定制 Customized on Request

适用场景：多品种、小批量精密清洗

Applications: Multi-Variety, Small-Batch Precision Cleaning

BDX-AS

全流程闭环自动化

全自动单臂超声波清洗机

Fully-Automatic Single-Arm Ultrasonic Cleaning Machine



机械臂自动上下料，全流程自动化

Robotic Arm Loading, Full-Process Automation

采用独立伺服机械手，根据预设的多段清洗工艺自动完成上料、清洗、漂洗、干燥及下料全过程。设备集成超声波清洗、鼓泡清洗、热风干燥等多功能模块，是精密零部件自动化清洗的核心设备。

An independent servo manipulator completes loading, washing, rinsing, drying and unloading per preset multi-stage recipes, with integrated ultrasonic, bubble-cleaning and hot-air drying modules.

核心亮点 KEY FEATURES

智能 PLC 触控交互 Intelligent PLC Touch Interface

高清彩色触摸屏，工艺参数实时显示与便捷修改。
HD color touch screen with real-time parameter display and editing.

双模式与程序记忆 Dual Mode & Recipe Memory

全自动/手动自由切换，可存储 100 套以上工艺配方。
Auto/manual switching with 100+ storable process recipes.

智能监控与预警 Intelligent Monitoring & Alerts

温度、液位、电流实时监测，故障自动声光报警。
Real-time monitoring of temperature, level and current with alarms.

高精密度循环过滤 High-Precision Circulating Filtration

四面溢流技术配合高精度袋式过滤，保持清洗液洁净。
Four-side overflow with precision bag filtration keeps the bath clean.

全方位无死角清洗 All-Around Cleaning, No Dead Corners

可选配工件摇摆与抛动系统，彻底清洗深孔、缝隙部位。
Optional rocking and agitation for deep holes and crevices.

广泛的工业适用性 Wide Industrial Applicability

广泛应用于汽车、航空航天、精密电子、五金加工等领域。
Widely used in automotive, aerospace, electronics and hardware.

特性参数 SPECIFICATIONS

控制方式 Control Method

PLC 触控 · 100+ 套配方 PLC Touch Control · Over 100 Preset Formulas

上下料方式 Loading Method

独立伺服机械臂 Independent Servo Robotic Arm

功率与尺寸 Power & Dimensions

按需定制 Customized on Request

适用场景：汽车制造、航空航天、精密电子、五金加工

Applications: Automotive · Aerospace · Electronics · Hardware

BDX-AM

规模化高节拍产能

全自动多臂超声波清洗机

Fully-Automatic Multi-Arm Ultrasonic Cleaning Machine



多臂协同，为高节拍生产而生

Multi-Arm Collaboration for High-Tempo Production

采用先进的多臂式位移组合机械手，将工件的上料、清洗、漂洗、干燥及下料等工序连续化作业，彻底改变传统单工位清洗的低效模式，是满足现代化工业大规模清洗需求的核心装备。

Advanced multi-arm transfer manipulators run loading, washing, rinsing, drying and unloading continuously — replacing inefficient single-station cleaning for large-scale industrial demands.

核心亮点

KEY FEATURES



智能 PLC 触控系统

Intelligent PLC Touch System

高清彩色触摸屏，智能程序精准控制，运行状态实时可视。
HD touch screen with precise program control and visual status.



双模自由切换

Auto / Manual Dual Modes

自动/手动无缝互换，可储存多套清洗工艺配方。
Seamless auto/manual switching with multiple stored recipes.



高效多臂机械传输

Efficient Multi-Arm Transfer

多工位组合机械手连续同步输送，杜绝等待时间。
Multi-station manipulators convey continuously — zero waiting time.



三维立体清洗技术

3D Stereo Cleaning Technology

集超声空化、工件抛动与高压喷淋于一体，覆盖清洗盲区。
Ultrasonics + agitation + high-pressure spray cover every blind spot.



全封闭环保设计

Fully Enclosed Eco Design

不锈钢全封闭结构，顶部高效排风，保障生产环境安全。
Fully enclosed stainless body with top exhaust for a safe workshop.

30%+

清洗节拍提升 Cycle Time Improved by 30%+

特性参数

SPECIFICATIONS

控制方式 Control Method

PLC 触控 · 多臂协同 PLC Touch Control · Multi-Arm Coordinated Operation

清洗方式 Cleaning Method

超声+抛动+喷淋 Ultrasonic + Oscillating Agitation + Spraying

功率与尺寸 Power & Dimensions

按需定制 Customized on Request

适用场景：大规模、高节拍生产场景

Applications: Large-Scale, High-Tempo Production

BDX-VH

旗舰 · 高端精密清洗

全自动真空碳氢超声波清洗机

Fully-Automatic Vacuum Hydrocarbon Ultrasonic Cleaning Machine



覆盖高端制造全场景清洗需求

For Every High-End Manufacturing Scenario

面向高端精密清洗市场的旗舰产品，以环保碳氢溶剂为介质，在真空密闭环境下运行。能深入工件微孔与盲孔实现彻底除油去污，并利用真空负压技术达成无残留的完美干燥效果。

The flagship for high-end precision cleaning — running on eco-friendly hydrocarbon solvent in a sealed vacuum chamber, removing oil deep from micro and blind holes with residue-free vacuum drying.

核心亮点

KEY FEATURES

环保与安全

Eco-Friendly & Safe

环保碳氢溶剂，真空低氧环境操作，杜绝易燃易爆风险。
Eco hydrocarbon solvent in low-oxygen vacuum eliminates fire risks.

深度洁净干燥

Deep Cleaning & Drying

真空脱气增强清洗力，真空干燥确保无残迹。
Vacuum degassing boosts cleaning power; vacuum drying leaves no residue.

溶剂循环再生

Solvent Recycling & Regeneration

内置高效蒸馏回收系统，溶剂利用率大幅提升，降低运营成本。
Built-in distillation recovery maximizes solvent use and cuts cost.

智能 PLC 触控系统

Intelligent PLC Touch System

高清彩色触摸屏，支持多套清洗工艺存储与一键调用。
HD touch screen stores and recalls multiple cleaning recipes.

全封闭结构设计

Fully Enclosed Structure

整机全封闭运行，有效防止溶剂挥发，更节能环保。
Fully enclosed operation prevents solvent evaporation — greener and cleaner.

高端应用领域

半导体晶圆、封装件、精密轴承、液压零部件、光学镜头、医疗器械
Semiconductors • Precision Bearings • Optics • Medical Devices

特性参数

SPECIFICATIONS

清洗介质 Cleaning Medium

环保碳氢溶剂 Hydrocarbon Solvent

干燥方式 Drying Method

真空负压干燥 Vacuum Drying

功率与尺寸 Power & Dimensions

按需定制 Customized on Request

适用场景：半导体、光学、医疗等对洁净度要求极高的行业

Applications: High-Cleanliness Critical Industries

广泛的应用领域

Wide Range of Applications

我们的清洗技术深度适配各行业的严苛标准，从微米级的精密电子器件到重型工业零部件，均能提供高效、环保的清洗解决方案。

Our cleaning technology meets the strictest standards of every industry — from micron-level electronics to heavy industrial parts.

01



电子与半导体

Electronics & Semiconductors

半导体硅片、精密线路板及电子元器件的纳米级洁净清洗，保障芯片制造良率。

Nano-level cleaning of wafers, PCBs and components for chip yield.

02



机械与五金

Machinery & Hardware

高效清洗精密轴承、齿轮、模具及机械零件，彻底剥离油污与金属碎屑。

Efficient cleaning of bearings, gears, molds and machined parts.

03



汽车制造

Automotive Manufacturing

覆盖发动机核心部件、液压元件及刹车盘，满足清洁度与防锈双重标准。

Engine parts, hydraulics and brake discs — cleanliness plus anti-rust.

04



航空航天

Aerospace

清洗航空精密结构件、发动机叶片及液压部件，适应高可靠性特种工艺。

Precision structures and engine blades for high-reliability processes.

05



医疗器械

Medical Devices

为手术器械、骨科植入物及医疗设备提供无菌级清洗方案。

Sterile-grade cleaning for surgical instruments and implants.

06



光学与光伏

Optics & Photovoltaics

清洗光学镜片、镜头及光伏硅片，无痕去除微米级微粒与污渍。

Lenses and PV wafers — traceless removal of micron particles.

07



表面处理预处理

Surface Treatment Pre-Cleaning

电镀、阳极氧化、喷涂前精密清洗，显著增强涂层附着力。

Pre-cleaning before plating, anodizing and coating for better adhesion.

获取专属清洗方案

Get Your Custom Cleaning Solution

联系我们 Contact Us → P.18

全方位服务与支持

Comprehensive Service & Support



专业的技术团队，为您提供从选型到售后的一站式无忧服务

One-Stop Worry-Free Service from Selection to After-Sales

优质的产品需要完善的服务支撑。我们为您提供贯穿设备全生命周期的服务体系，从前期的方案规划到后期的运维保障，确保每一位客户都能获得高效、安心的使用体验。

Quality products deserve complete service support. Our full-lifecycle service system covers early-stage solution planning to long-term operation and maintenance.

六大服务承诺 OUR SERVICES

✓ 免费售前咨询 Free Pre-Sales Consulting

提供专业的行业技术咨询与设备选型建议。
Professional technical consulting and model selection advice.

⚙️ 免费工艺试验 Free Process Testing

免费进行工件清洗效果实测，验证工艺可行性。
Free cleaning tests on your workpieces to verify feasibility.

🔧 专属方案设计 Custom Solution Design

根据工件特性与洁净度要求，量身打造个性化清洗方案。
Tailored solutions based on part features and cleanliness needs.

👨‍🔧 技术操作培训 Technical & Operation Training

提供现场设备操作与维护保养培训，确保安全作业。
On-site operation and maintenance training for safe production.

🛡️ 终身维修保障 Lifetime Maintenance

设备终身维修服务，快速响应故障报修，保障生产连续性。
Lifetime repair service with fast response for production continuity.

⚡ 快速响应支持 7×24 Rapid Response

7×24 小时技术响应，定期设备巡检与回访。
7×24 technical response with regular inspections and follow-ups.

贯穿设备全生命周期的服务体系，做您坚实的后盾

A service system throughout the equipment lifecycle — your solid backup



合作共赢 · 品质至上

Win-Win Cooperation · Quality First

我们期待与您携手，共同解决清洗难题，提升产品品质！

We look forward to working with you — solving cleaning challenges and improving product quality together.

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