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海外网点
美国・德国・法国・巴西・日本・韩国・印度・越南
印尼・马来西亚・巴基斯坦・土耳其・摩洛哥

Overseas Locations
USA · Germany · France · Brazil · Japan · South Korea · India
Vietnam · Indonesia · Malaysia · Pakistan · Turkey · Morocco

国内网点
东莞・随州・武汉・苏州・上海・淄博・重庆

Domestic Locations
Dongguan · Suizhou · Wuhan · Suzhou · Shanghai · Zibo · Chongqing

Facebook　LinkedIn　Instagram　YouTube　微信公众号 Official WeChat Account　视频号 WeChat Video Channel　客服微信 Customer Service WeChat　抖音号 Douyin Account

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THE LEADER IN THE CONSTRUCTION OF GLOBAL SMART FACTORIES FOR NANOMATERIALS

全球纳米材料智慧工厂建造的引领者



琅菱智能 LONGLY

让好装备成为您企业的核心竞争力
Let smart equipment become the competitiveness of your enterprise

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COMPANY INTRODUCTION
企业介绍

选择琅菱，一步到位，领先一路。
CHOOSE LONGLY, GET IT DONE ONCE,
STAY AHEAD ALL THE WAY.







广东琅菱集团总部
GUANGDONG LONGLY GROUP HEADQUARTERS

广东琅菱集团总部占地约2万㎡，打造集高端纳米研磨研发中心与智能装备制造基地于一体的综合生态园区。专注突破海外技术壁垒，整合全球资源，立志成为全球纳米材料领域引领者。

Guangdong LONGLY Group's Global Headquarters Base, covering an area of approximately 20,000 ㎡, is built as a comprehensive ecological park integrating a high-end nano-grinding R&D center and an intelligent equipment manufacturing base. We are dedicated to breaking overseas technical barriers, integrating global resources, and striving to become a global leader in the nano-material industry.

湖北随州琅菱产业园
LONGLY INDUSTRIAL PARK, SUIZHOU, HUBEI

湖北随州琅菱产业园是湖北首个集纳米研磨研发与智能装备制造于一体的高科技产业园，聚焦服务新能源、新材料领域。配备200余套加工设备，实现80%核心件自主生产，产能雄厚，产品远销全球。

Suizhou LONGLY Industrial Park in Hubei is the province's first high-tech park integrating nano-grinding R&D and intelligent equipment manufacturing, focusing on new energy and new materials. Equipped with over 200 sets of processing facilities, it achieves in-house production of 80% core components with strong capacity, supplying products worldwide.

琅菱智能始创于 2002 年，是一家集智能设备研发、生产、销售与服务于一体的国家级专精特新“小巨人”企业。24年来专注于高端纳米新材料领域的储存、混合、研磨、分散、干燥及输送等技术的研发与应用，致力于为客户打造智能单机+智慧工厂一站式制造平台。现已服务新能源、新材料、医药、食品、化妆品、半导体、油墨、油漆、涂料等40多个行业，合计4000余家企业，提供交钥匙系统工程510余套，累计交付设备40000多台。

LONGLY Intelligent was founded in 2002. It is a national-level specialized, refined, unique and innovative "Little Giant" enterprise integrating the R&D, production, sales and service of intelligent equipment. For 24 years, it has focused on the R&D and application of technologies such as storage, mixing, grinding, dispersion, drying and conveying in the field of high-end nano new materials. It is committed to building a one-stop manufacturing platform of intelligent standalone equipment plus smart factories for customers. It has served more than 4,000 enterprises across over 40 industries including new energy, new materials, pharmaceuticals, food, cosmetics, semiconductors, inks, paints and coatings, provided over 510 turnkey system projects, and delivered a total of more than 40,000 sets of equipment.

24年
智能单机+智慧工厂
24 years
Intelligent Standalone Equipment + Smart Factory Solutions

100强
东莞市创新型企业
Top 100 Innovative Enterprises in Dongguan

500强
广东省制造业
Top 500 Guangdong Manufacturing Enterprises

800+
员工数量
800+ Employees

CORPORATE HONORS
企业荣誉

国家级核心资质
- 国家第五批专精特新 “小巨人”
- 国家 “高新技术企业”

NATIONAL CORE QUALIFICATIONS
- National 5th Batch of Specialized, Refined, Differential, Innovative "Little Giant" Enterprises
- National "High-Tech Enterprise"

省级核心资质
- 广东省制造业企业 500 强
- 广东省制造业单项冠军企业
- 广东省工程技术研究中心
- 广东省博士工作站
- 广东省 “专精特新中小企业”

PROVINCIAL CORE QUALIFICATIONS
- Guangdong Top 500 Manufacturing Enterprises
- Guangdong Provincial Manufacturing Single Champion Enterprise
- Guangdong Engineering Technology Research Center
- Guangdong Provincial Doctoral Workstation
- Guangdong Provincial "Specialized, Refined, Differentiated & Innovative" SMEs

市级核心资质
- 东莞市百强创新型企业
- 东莞市 “倍增计划” 名誉试点企业
- 东莞市寮步镇“经济贡献奖”

CORE MUNICIPAL QUALIFICATIONS
- Dongguan Top 100 Innovative Enterprises
- Dongguan "Multiplier Plan" Honorary Pilot Enterprise
- Liaobu Town, Dongguan "Economic Contribution Award"





- 东莞市工程技术研究中心
  Dongguan Municipal Engineering Technology Research Center



- 广东省守合同重信用企业
  Guangdong Province Enterprise Of Obseving Contract And Valuing Credit



- ISO9001 质量管理体系认证
  ISO9001 Quality Management System Certification



- 中国涂料优秀品牌
  Excellent Brand in China's Coatings Industry



- 最佳质量奖
  Best Quality Award



- 寮步镇产值增量贡献奖
  Liaobu Town Output Value Growth Contribution Award



- 东莞市锂电行业协会副会长单位
  Vice Chairman Unit of Dongguan Lithium Battery Industry Association



- 计算机软件著作权
  Computer Software Copyright Registration



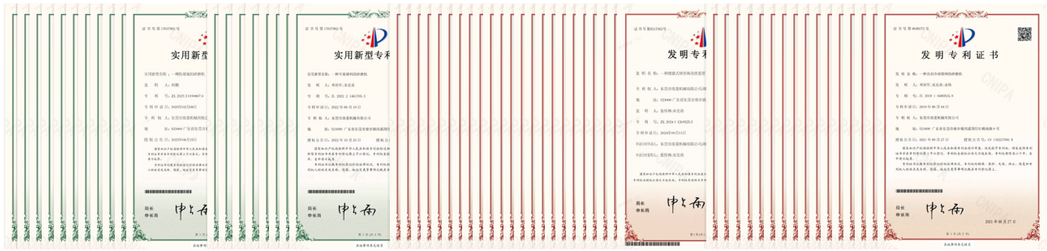
- 欧盟ATEX防爆认证
  EU ATEX Explosion Protection Certification



- 欧盟CE认证证书
  EU CE Certificate of Conformity



- 美国UL认证
  UL Certification



- 270多项发明和实用新型专利
  270+ Invention and Utility Model Patents

DEVELOPMENT HISTORY
发展历程

2022

- 通过东莞市百强创新型企业认定
  Certified as one of Dongguan's top 100 innovative enterprises
- 双动力砂磨机入选东莞市首台(套)重点技术装备
  Dual-power bead mill selected as the first key technical equipment in Dongguan City
- **认定东莞市纳米材料研磨系统和设备工程技术研究中心**
  Certified as Dongguan Nanomaterial Grinding System and Equipment Engineering Technology Research Center

2023

- **荣获第五批国家专精特新“小巨人”**
  Won the fifth batch of national specialized and Innovative "little giants"
- 通过广东省博士工作站认定
  Accredited as a doctoral workstation in Guangdong Province
- 获得广东省制造业企业500强
  Won the title of Top 500 Manufacturing Enterprises in Guangdong Province

2024

- 通过广东省单项冠军企业认定
  Passed the certification of Guangdong Province's single champion enterprise
- 棒销式砂磨机入选东莞市首台(套)重点技术装备
  The pin-type bead mill was selected as the first key technical equipment in Dongguan City
- **磷酸铁锂研磨系统获东莞市重大科技项目入库与产业化奖励**
  The lithium iron phosphate grinding system won the Dongguan City Major Science and Technology Project Registration and Industrialization Award

2025–2026

- **琅菱智能全球新总部基地正式动工，项目占地约2万平方米，将打造集高端纳米研磨研发与智能装备制造于一体的综合产业园区**
  LONGLY's new global headquarters has broken ground. Covering approximately 20,000 square meters, it will be a comprehensive industrial park integrating high-end nano-grinding R&D and intelligent equipment manufacturing.
- 湖北随州琅菱二期生产基地，正式全面投产启用
  LONGLY Suizhou (Hubei) Phase II Production Base Officially Commences Full Operation

2021

- **湖北随州生产基地正式启用**
  Suizhou,Hubei production base officially opened
- 入驻松山湖高新技术产业开发区
  Settled in Songshan Lake High-tech Industrial
- 入选工信部2021年重点产品、工艺“一条龙”应用示范参与企业之一
  Selected as one of the enterprises participating in the one-stop application demonstration of key product and process by the Ministry of Industry and Information Technology in 2021

2020

- 荣获国家建筑业企业资质证书
  Won the national construction enterprise qualification certificate
- 荣获国家安全生产许可证
  Won the National Safety Production License
- **完成设计、建造国内首条MLCC智能化产线，促使国产MLCC步入高端国际化序列**
  Completed the design and construction of the first domestic MLCC intelligent production line, prompting domestic MLCC to enter the high-end international market

2019

- **获得欧盟ATEX防爆认证**
  Obtained EU ATEX explosion-proof certification
- 美国、日本服务中心成立
  Establishment of USA and Japan service centers
- 推出高粘度机型LDM-G
  Launched high viscosity model LDM-G
- 入选东莞“倍增计划”试点企业
  Selected as a pilot enterprise of Dongguan "doubling plan"

2015

- **完成中国首条磷酸铁锂自动化产线**
  Completed China's first lithium iron phosphate automated production line
- 推出纳米超声分散机和行星真空搅拌机
  Launched nano ultrasonic disperser and planetary vacuum mixer

2020-至今 | 智慧工厂 Smart Factory

2015-2019 | 智能时代 Intelligent Era

2002

- **公司正式成立，定位为中国高端研磨分散设备高新技术企业**
  The company has officially been established, positioning itself as a high-tech enterprise specializing in premium-grade grinding and dispersion equipment in China

2006

- 出口德国飞机漆企业
  Export to German aircraft paint enterprise
- **引进德国机械密封技术**
  Introduced German mechanical seal technology
- 通过CE认证获得欧盟进出口权
  Passed CE certification to obtain EU import and export rights

2010

- 通过ISO9001质量管理体系认证
  Certified in accordance with ISO 9001 quality management system

2011

- 获得中国十佳涂料民族品牌
  Won the Top 10 national paint brands in China

2013

- 通过高新技术企业认定
  Passed high-tech enterprise certification
- 推出自动化投料配料系统
  Launched automatic batching system
- 研磨系列产品销量突破2000台
  Sales of grinding series products exceeded 2,000 units

2002-2009 | 微米时代 Micron Era

2010-2014 | 纳米时代 Nano Era

GLOBAL LAYOUT
全球布局

2大生产基地
2 major production bases

广东琅菱科技园
Guangdong LONGLY Technology Park

湖北琅菱产业园
Hubei LONGLY Industrial Park

13个国外服务网点
13 overseas service outlets

德国、法国、美国、巴西、日本、韩国、印度、越南、印尼、马来西亚、土耳其、巴基斯坦、摩洛哥。

Germany, France, the United States, Brazil, Japan, South Korea, India, Vietnam, Indonesia, Malaysia, Türkiye, Pakistan, Morocco.

专注材料研磨分散与自动化产线，服务全球4000+客户。
Focused on grinding & dispersion and automated lines, serving 4,000+ global customers.

客户总量第一；出口量国内第一；多领域市场占有率国内第一

No.1 in total customer base; No.1 in national export volume; No.1 in market share across multiple industries in China.

行业首家与德企深度合作的企业，亦是国内砂磨机对德航天漆出口量排名第一的企业。

The first enterprise in the industry to establish in-depth cooperation with German companies, and also the domestic enterprise ranking first in the export volume of bead mills for German aerospace coatings.

国内行业首家实现砂磨机出口至日本的企业。

The first enterprise in China to export bead mills to Japan.

40000+
累计销售设备
40000+ Equipment Served Worldwide

4000+
全球客户
4000+ Global Customers

510+
交钥匙工程
510+ Turnkey Projects



PRODUCT DEVELOPMENT CONCEPT

产品发展理念

150+

研发团队
150+R&D team

19%

研发人员占比
19% of R&D personnel

270+

已授权专利
270+ Authorized patents

20+

已授权发明专利
20+ Authorized invention patents

产品每2年迭代更新一次，性能及产能提升**30-50%**。

琅菱致力于为客户在提升产能、转型升级的道路上搭建高速桥梁，助力客户企业提升核心竞争力、掌握市场主动权，持续创造价值！

Technology upgrade every 2 years **30-50%** output improvement

LONGLY is committed to building high-speed bridges for customers on the road of capacity improvement, transformation and upgrading, helping customer enterprises to improve their core competitiveness, seize the initiative in the market, and continue to create value.

TWO RISES AND TWO FALLS

两升两降

提升产品质量

提高产品性能
提高产品批次稳定性

OPTIMIZE PRODUCT QUALITY

Enhance product performance
Improve batch-to-batch consistency

提升产能效率

提高产量
提高单位时间产出

MAXIMIZE PRODUCTIVITY

Increase overall output
Boost output per unit time



降低人员管理难度

减少由员工素质和
人员管理造成的损失
降低出错概率

SIMPLIFY WORKFORCE MANAGEMENT

Reduce losses caused by staff capability gaps and management inefficiencies
Minimize human error risks

降低设备维护成本

降低能耗 减少维护成本
节约人工成本 安全环保

MINIMIZE OPERATING COSTS

Reduce energy consumption
Cut maintenance costs
Lower labor costs
Safe and environmentally friendly

ADVANCED R&D CAPABILITIES
先进的研发实力

以人才为基，以匠心致远。

Built on Talent, Forged by Craftsmanship.

“积力所举无不胜，众智为之无不成。” 在董事长宋克甫的带领下，琅菱智能汇聚行业前沿人才，打造国内一流高素质团队。团队深耕高端技术领域，拥有超十年研发与项目交付经验，建成项目辐射全国多个城市，以专业实力构建国际卓越的高品质企业标杆。

Under the leadership of Chairman Song Kefu, LONGLY Intelligent gathers cutting-edge talents in the industry and builds a first-class high-quality team in China. The team is deeply rooted in the field of high-end technology, with over ten years of experience in research and development and project delivery. They have built projects that radiate to multiple cities across the country, and have built an international benchmark for high-quality enterprises with professional strength.



● 博士工作站
Doctoral workstation

琅菱拥有一支来自于华中科大、中南大学、武汉理工等知名科研院所(校)的博士、硕士组成的专家型研发团队。

LONGLY has an expert R&D team composed of doctors and masters from well-known scientific research institutes (schools) such as Huazhong University of Science and Technology, Central South University, and Wuhan University of Technology.

● 国外交流学习
Foreign exchange and learning

深度参与国际技术合作，近二十年以来，从学习到创新再到超越，是真正的把国外技术引进到国内的企业，并实现自主创新，真正实现国产替代，为客户解决国外“卡脖子”技术。

In-depth participation in international technical cooperation. In the past two decades, from learning to innovation to transcendence, It is a enterprise that truly introduces foreign technology into China, and realizes independent innovation, truly realizes domestic substitution, and solves foreign "stuck neck" technology for customers.

● 国外工程师
Foreign engineers

公司拥有德国、日本国外专家团队，在机械密封方面，与德国机械密封技术专家深度合作，聘请日本研发总工程师致力于喷雾干燥高端技术创新。

The company has a team of foreign experts from Germany and Japan. In the field of mechanical seals, we maintain in-depth cooperation with German mechanical seal technology experts. We have also hired a Japanese Chief R&D Engineer, who is committed to high-end technological innovation in spray drying.

● 仿真中心
Simulation center

来自巴基斯坦的博士和浙江工业大学的数名硕士组成的流体仿真团队，已经在多物理场耦合仿真理论模型研发等关键技术领域实现新突破。

The fluid simulation team, which consists of a PhD from Pakistan and several masters from Zhejiang University of Technology, has achieved new breakthroughs in key technical fields such as the development of multi-physics field coupling simulation theoretical models.

SMART MANUFACTURING BASE
智造基地

国内规模最大的砂磨机生产基地之一
One of the largest bead mill production bases in China

琅菱智能作为砂磨机行业国内品牌领先者，拥有六家分公司，分别是在中国 (随州、苏州、淄博、武汉) 日本、韩国，目前在东莞和随州有两大生产基地，总占地面积超 140000 平方米。

LONGLY Intelligent, a leading domestic brand in the bead mill industry, owns six subsidiaries located in China (Suizhou, Suzhou, Zibo, Wuhan), Japan and South Korea. It currently operates two major production bases in Dongguan and Suizhou, with a total area of over 140,000 square meters.

140,000 m^2





砂磨机加工区
Bead mill processing area





高效匀浆加工区
Efficient homogenization processing area



喷雾干燥加工区
Spray drying processing area



行星搅拌机加工区
Planetary mixer processing area



锆珠生产车间
Zirconium bead production workshop



乳化机加工区
Emulsifying machine processing area



双螺杆匀浆加工区
Twin screw homogenization processing area



MANUFACTURING STRENGTH
制造实力

200+
月产量设备
200+monthly production equipment

200+
高端加工设备
200+high-end processing equipment

80%
核心部件自主加工
80% of core components are manufactured in-house



原料严管，一年双检；定期对供应商进行考核评估，从源头上把控产品质量。

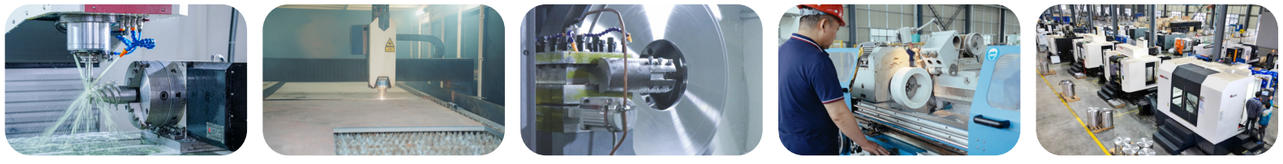
Strict raw material management with two annual inspections; suppliers are regularly assessed and evaluated to control product quality from the source.

200套高端加工中心，80%核心零件自主生产

自主加工完成高匹配度和契合度，这是琅菱设备高性能、高稳定性和高可靠性的核心关键所在

200 sets of high-end machining centers, with 80% of core components manufactured in-house.

In-house machining delivers high matching accuracy and fitting precision, which underpins the core strengths of LONGLY equipment: high performance, superior stability and outstanding reliability.



多道检查工序，层层品控

配备 2.5 次元龙门全自动测量仪、激光粒度仪、XPF 合金分析仪等精密检测设备，依托完善质控体系，严控细节，保障产品高精度出品。

Multiple inspection procedures with strict layer-by-layer quality control.

Equipped with precision testing instruments including 2.5D gantry automatic measuring machines, laser particle size analyzers and XRF alloy analyzers, we rely on a sound quality control system to strictly monitor every detail and ensure high-precision product delivery.



1000L

中国首家推出永磁直驱式1000L大机型
First in China to Launch the Permanent Magnet Direct-Drive 1000L Large-Scale Bead Mill

2022 年，国内首家推出永磁直驱 1000L 陶瓷棒销机，开创行业新标准

In 2022, as the first domestic manufacturer to launch the permanent magnet direct-drive 1000L ceramic bead mill, we set a new industry benchmark

NO.1

产品稳定性国内第一
No.1 in China for Product Stability

替代进口高端设备，多基地采购超百台，引领高效研磨新时代

Replaces imported high-end equipment, with over 100 units purchased across multiple bases, leading a new era of high-efficiency grinding

NEW

首家实现 20-50 纳米研磨解决方案
First in China to Achieve 20-50 nm Grinding Solutions

2024 年国内首创 QB 系列纳米砂磨机，突破锆珠直径 0.015mm 超细研磨极限

In 2024, the domestically pioneered QB series nano bead mill was launched, breaking the ultra-fine grinding limit with a 0.015mm zirconium bead diameter

NEW

全球首家研发立卧式砂磨机
World's First to Develop Vertical & Horizontal Bead Mills

2024 年立卧式砂磨机全球首发，重塑砂磨技术革新

In 2024, we globally launched the vertical-horizontal bead mill, redefining bead milling technology innovation






SEVEN MAJOR BUSINESS DIVISIONS

七大事业部

琅菱智能构建七大核心事业部，覆盖纳米材料处理全产业链与智慧工厂整体解决方案，为各行业客户提供一站式智能制造服务：

LONGLY Intelligent has established seven core business divisions, covering the entire industrial chain of nano-material processing and overall smart factory solutions, providing one-stop intelligent manufacturing services for customers in various industries:

粉体输送事业部
Powder Conveying Division

无尘投料站、吨包投料站

Dust-free feeding stations, bulk bag feeding stations

高效匀浆事业部
High-Efficiency Slurry Homogenization Division

双螺杆匀浆、双行星搅拌机、高效匀浆

Twin-screw slurry homogenizers, dual-planetary mixers, high-efficiency slurry homogenization

罐体事业部
Tank Division

钢构平台、搅拌罐、反应釜

Steel structure platforms, mixing tanks, reaction kettles

分散 / 研磨设备事业部
Dispersion & Grinding Equipment Division

微米级砂磨机、纳米级砂磨机、高速分散机、乳化机、高压均质机

Micron-level bead mills, nano-level bead mills, high-speed dispersers, emulsifiers, high-pressure homogenizers

喷雾干燥事业部
Spray Drying Division

喷雾干燥机

Spray dryers

智能化系统事业部
Intelligent System Division

智能工厂EPC、MES系统

Intelligent Factory EPC, MES System

氧化锆陶瓷事业部
Zirconia Ceramics Division

锆珠、氧化锆陶瓷制品

Zirconia beads, zirconia ceramic products



SERVICE QUALITY
服务品质

致力为客户提供更优质、更稳定的产品与专业服务。

We are committed to providing customers with higher-quality, more reliable products and professional services.

琅菱智能始终以客户为中心，致力于为客户打造全方位的优质体验。我们不仅提供技术领先、品质卓越的产品，还为客户精心定制契合需求的解决方案，更确保服务及时周到、无微不至。琅菱智能郑重承诺，所有产品均经过严格把控，品质上乘，值得信赖。

LONGLY Intelligent is always customer-centric and committed to delivering an all-round premium experience for our customers.We not only provide technologically advanced and high-quality products, but also carefully tailor solutions to meet your specific needs, and ensure timely, thoughtful and attentive service.LONGLY solemnly promises that all products are subject to strict quality control, with superior quality you can trust.







5个售后网点
5 After-sales outlets

华东、 华南、华北、华中、西南
East China,South China,North China,Central China, Southwest China

24小时内
Within 24 hours

响应客户需求
Respond to customer needs

40+应用行业
40+Application Industries

新能源、电子陶瓷、食品、生物制剂、高纯纳米粉料、涂料、油墨等
Lithium-ion new energy, coatings, inks, MLCC, electronic ceramics, food, biological agents, high-purity nanopowders

120+人
120+ People

售后团队
After-sales team

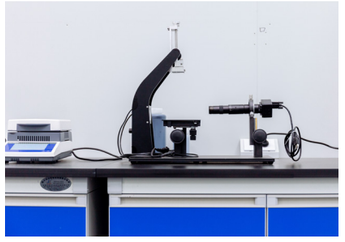
30,000次
实验经验积累
30,000+ Accumulated Experiments

琅菱智能拥有东莞、随州、苏州三大实验基地，累计超30000次实验经验，聚焦产品性能检测、设备验证与材料研究，突破核心技术、深化产学研融合，打造全流程材料工艺实验室，为客户提供一站式实验解决方案。

LONGLY Intelligent operates three major experimental bases in Dongguan, Suizhou and Suzhou, with a cumulative total of over 30,000 experiments. Focusing on product performance testing, equipment verification and material research, we break through core technologies, deepen the integration of industry, university and research, build a full-process material process laboratory, and provide customers with one-stop experimental solutions.







EPC SYSTEM ENGINEERING
EPC系统工程

510+
交钥匙系统工程
510+ Turnkey System Projects

200+
人专业施工团队
200+ Professional Construction Team

10+
年交付经验
10+ Years of Delivery Experience

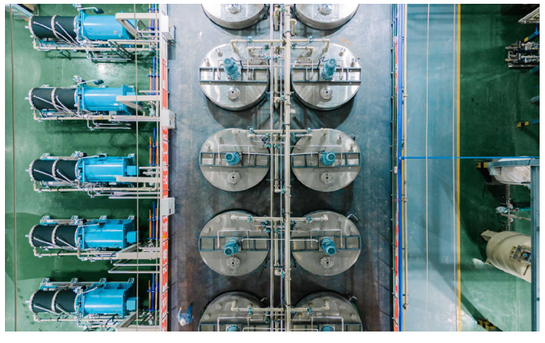
每一条产线的投产运营，都意味着客户企业的转型升级，并开启智能化高效生产模式新里程碑！生产更加高效，环保，更少人工，效率与品质双重提高。

The operation of each production line means the transformation and upgrading of customer enterprises and the opening of a new milestone in the intelligent and efficient production model! Production is more efficient, environmental protection, less labor, higher efficiency and better quality.













NT-V LABORATORY PIN NANO BEAD MILL

NT-V 实验型棒销式纳米砂磨机

此款为研发型设备，搭载直驱结构与棒销式高能量密度转子，操作灵活且研磨均匀无死角。配备专利强制冷却系统，出料温度低，粒径分布窄。实验数据与量产无缝对接，已获全国30余所高校及科研机构验证，是研发与生产高效衔接的理想解决方案。

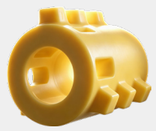
This R&D-oriented equipment is equipped with a direct-drive structure and a high-energy-density pin-type rotor, featuring flexible operation and uniform grinding without dead zones. It is fitted with a patented forced cooling system, ensuring low discharge temperature and narrow particle size distribution. With seamless alignment between experimental data and mass production, it has been verified by over 30 universities and research institutions nationwide, making it an ideal solution for efficient connection between R&D and production.



氧化锆 / Zirconium oxide



耐磨钢 / Wear-resistant steel



聚氨酯 / Polyurethane

技术指标 / Technical indicators

出料粒径：200nm-2μm　Discharge particle size：200nm-2μm

粘度：≤10000cps　Viscosity：≤10000cps

研磨介质：0.2-1.4mm　Grinding media：0.2-1.4mm

研磨结构：棒销式　Grinding structure：Pin-Type

分离系统：筛网分离　Separation system: Screen separation

产品特性 / Product Features

- 所使用浆料的粘度范围广泛
  The viscosity range of the slurry used is wide
- 分离器结构耐磨不易损，有效降低漏珠风险
  The separator structure is wear-resistant and not easily damaged, effectively reducing the risk of bead leakage
- 专利筛网设计，筛网流量大，不易变形卡球
  Patent screen design, large screen flow rate, not easily deformed and stuck balls
- 采用德国技术机械密封，杜绝泄漏风险，稳定性好
  Adopting German technology mechanical seals to eliminate leakage risks and ensure good stability
- 可使用0.2mm以上的锆珠，研磨细度可达200纳米以上，普遍满足高端物料的研磨需求
  Zirconium beads with a diameter of 0.2mm or more can be used, and the grinding fineness can reach over 200 nanometers, which generally meets the grinding needs of high-end materials

可选配置 / Optional configuration

- 机械密封：轴封/机械密封
  Mechanical seal: Shaft seal/Mechanical seal
- 分离系统：筛网分离
  Separation system: Screen separation
- 溶剂体系：水性/油性
  Solvent system: Water-based/Solvent-based
- 转子材质：氧化锆/聚氨酯
  Rotor material: Zirconia/Polyurethane
- 内筒材质：氧化锆/碳化硅/聚氨酯
  Inner chamber material: Polyurethane/ Zirconium oxide/Silicon carbide
- 电 机: 永磁直驱电机/三相异步电动机
  Motor: Permanent magnet direct drive motor/ three-phase asynchronous motor



型号 Model	研磨槽净容量 Grinding chamber net capacity (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)	加工批量 Batch processing (L)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
NT-V 0.1L	0.12	0.3-1.4	3.5	0.15-0.5	200	1000×800×950
NT-V 0.3L轴封款 NT-V 0.3L Shaft seal type	0.3	0.3-1.4	1.5	0.2-0.5	75	600×550×700
NT-V 0.3L 机封款 NT-V 0.3L Machincal seal type	0.3	0.3-1.4	4	0.2-0.5	150	680×720×1050
NT-V 0.6L 永磁直驱 NT-V 0.6L Permanent magnet direct drive	0.6	0.2-1.4	3.75	1-3	200	900×600×720
NT-V 0.6L 防爆 NT-V 0.6L Explosion-proof	0.6	0.2-1.4	4	1-3	230	850×1000×1050
NT-V 1L 永磁直驱 NT-V 1L Permanent magnetdirect drive	1	0.2-1.4	5.5	1.5-5	220	900×600×720
NT-V 1L 防爆 NT-V 1L Explosion-proof	1	0.2-1.4	4	1.5-5	250	850×1000×1050
NT-V 2L	2	0.2-1.4	7.5	3-10	350	1100×800×1050

应用行业 / Application industries

硅碳负极、石墨烯、MLCC、LTCC、打印喷墨、电子浆料、钛酸钡、氧化铝、磷酸铁锂、印花墨水、生物医药、非金属粉体等高端纳米材料领域

Silicon-carbon Anode, graphene, MLCC, LTCC, High end nanomaterials fields such as inkjet printing, electronic pastes, barium titanate, aluminum oxide, lithium iron phosphate, printing ink, biomedicine, non-metallic powders, etc

NT-VS LABORATORY DUAL-POWER CENTRIFUGAL NANO BEAD MILL

NT-VS 实验型双动力离心式纳米砂磨机

此款为研发型设备，搭载棒销式高能量密度转子，操作灵活且研磨均匀无死角。配备专利强制冷却系统，粒径分布窄。实验数据与量产无缝对接，已获全国30余所高校及科研机构验证，是研发与生产高效衔接的理想解决方案。

This R&D-oriented equipment is equipped with a direct-drive structure and a high-energy-density pin-type rotor, featuring flexible operation and uniform grinding without dead zones. It is fitted with a patented forced cooling system, ensuring low discharge temperature and narrow particle size distribution. With seamless scale-up between experimental data and mass production, it has been verified by over 30 universities and research institutions nationwide, making it an ideal solution for efficient connection between R&D and production.

技术指标 / Technical indicators

出料粒径：50-500nm　Discharge particle size：50-500nm

粘度：≤2000cps　Viscosity：≤2000cps

研磨介质：0.05-0.3mm　Grinding media：0.05-0.3mm

研磨结构：棒销式　Grinding structure：Pin-Type

分离系统：离心分离　Separation system: Centrifugal separation

产品特性 / Product Features

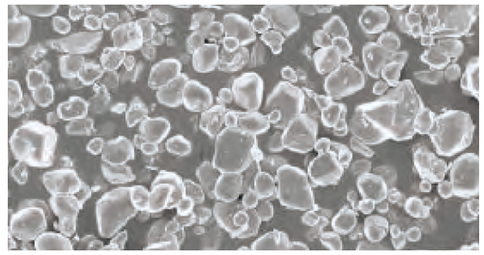
- 双动力物料研磨与物料分离独立运行
  Dual power material grinding and material separation operate independently
- 离心式分离无筛网，不堵料
  Centrifugal separation without screen, no clogging of materials
- 采用德国技术机械密封，杜绝泄漏风险，稳定性好
  Adopting German technology mechanical seals to eliminate leakage risks and ensure good stability
- 可使用0.05mm以上的锆珠，研磨细度可达50纳米以上，普遍满足高端物料的研磨需求
  Zirconium beads larger than 0.05mm can be used, with a grinding fineness of over 50 nanometers, generally meeting the grinding needs of high-end materials
- 是100纳米细度实施稳定量产为数不多的机器
  It is one of the few machines that implements stable mass production with a fineness of 100 nanometers.

可选配置 / Optional configuration

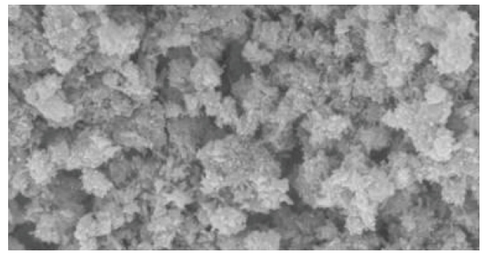
- 溶剂体系：水性/油性
  Solvent system: Water-based/Solvent-based
- 内筒材质：氧化锆/碳化硅/聚氨酯
  Inner chamber material: Zirconia/Silicon Carbide/Polyurethane
- 转子材质：氧化锆/聚氨酯
  Rotor material: Zirconia/Polyurethane



研磨前后对比 / Comparison before and after grinding



钛酸钡研磨前　D50=1~3um
D50 = 1~3um BT before grinding



钛酸钡研磨后　D50≤200nm
BT after grinding D50≤200nm

型号 Model	研磨槽净容量(L) Grinding chamber net capacity (L)	介质尺寸(mm) Medium size (mm)	电机功率(kW) Motor power (kW)
NT-V2S	1.25	0.05-0.3	15
	加工批量(L) Batch processing (L)	重量(kg) Weight (kg)	外形尺寸(mm) Overall dimensions (mm)
	3-10	700	1400×800×1650

应用行业 / Application industries

硅碳负极、石墨烯、MLCC、LTCC、打印喷墨、电子浆料、钛酸钡、氧化铝、磷酸铁锂、印花墨水、生物医药、非金属粉体等高端纳米材料领域。

Silicon-carbon Anode, graphene MLCC、LTCC、 High end nanomaterials fields such as inkjet printing, electronic pastes, barium titanate, aluminum oxide, lithium iron phosphate, printing ink, biomedicine, non-metallic powders, etc

NT-V MASS PRODUCTION PIN NANO BEAD MILL

NT-V 量产型棒销式纳米砂磨机

东莞市第一批制造业单项冠军产品；采用棒销式高效研磨结构，精准控制；大型设备可使用永磁直驱电机，是集节能低耗等诸多优点的纳米级研磨"明星产品"，能为众多行业的纳米级研磨需求提供优质解决方案。

The first batch of champion products in the manufacturing industry in Dongguan City; Adopting a pin type high-efficiency grinding structure for precise control; Large scale equipment can use permanent magnet direct drive motors, which are a "star product" for nanoscale grinding with many advantages such as energy saving and low consumption. They can provide high-quality solutions for the nanoscale grinding needs of many industries.

技术指标 / Technical indicators

出料粒径：200nm-2μm　Discharge particle size：200nm-2μm

粘度：≤10000cps　Viscosity：≤10000cps

研磨介质：0.2-2.0mm　Grinding media：0.2-2.0mm

研磨结构：棒销式　Grinding structure：Pin-Type

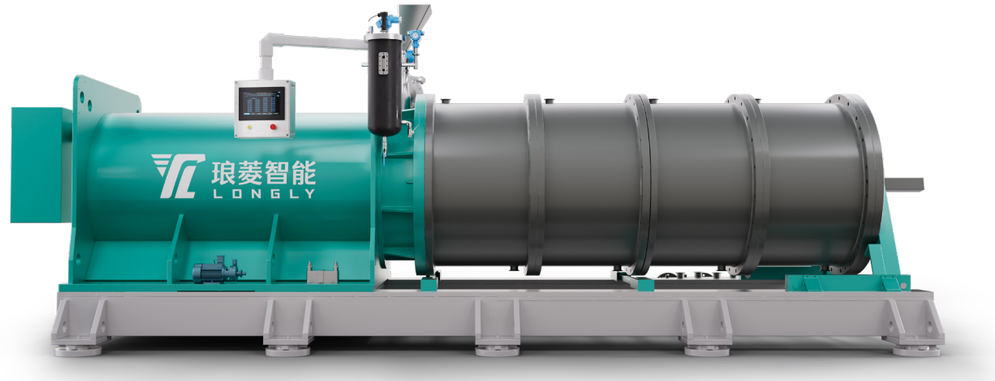
分离系统：筛网分离　Separation system: Screen separation

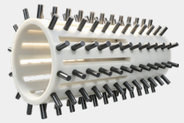
产品特性 / Product Features

- 所使用浆料的粘度范围广泛
  The viscosity range of the slurry used is wide
- 分离器结构耐磨不易损，有效降低漏珠风险
  The separator structure is wear-resistant and not easily damaged, effectively reducing the risk of bead leakage
- 专利筛网设计，筛网流量大，不易变形卡球
  Patent screen design, large screen flow rate, not easily deformed and stuck balls
- 采用德国技术机械密封，杜绝泄漏风险，稳定性好
  Adopting German technology mechanical seals to eliminate leakage risks and ensure good stability
- 可使用0.2mm以上的锆珠，研磨细度可达200纳米以上，普遍满足高端物料的研磨需求
  Zirconium beads with a diameter of 0.2mm or more can be used, and the grinding fineness can reach over 200 nanometers, which generally meets the grinding needs of high-end materials
- 设计适用于大流量生产(连续式或循环式)
  Designed for high flow production (continuous or cyclic)
- 棒销式转子高能量密度，研磨介质分布均匀无死角，产品颗粒小且分布窄
  Rod pin rotor with high energy density, uniform distribution of grinding medium without dead corners, small and narrow distribution of product particles
- 搭载专利强制冷却系统，有效控制出料温度，保障物料稳定性
  Equipped with patented forced cooling system, effectively controls discharge temperature and ensures material stability
- 可选永磁直驱电机，效率高、节能约 10%；标配电机可用380V/690V，可定制高压款；直驱结构规避皮带传动缺陷，降噪减耗更可靠
  Optional high-efficiency permanent magnet direct-drive motor saves ~10% energy. Standard 380V/690V motors with customizable high-voltage options. Direct-drive design eliminates belt-driven issues, cuts noise and loss, and boosts reliability

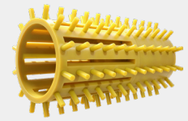
可选配置 / Optional configuration

- 溶剂体系：水性/油性
  Solvent system: Water-based/Solvent-based
- 内筒材质：氧化锆/聚氨酯/碳化硅
  Inner chamber material: Zirconia/Polyurethane/Silicon carbide
- 电 机: 永磁直驱电机/三相异步电动机/直驱电机
  Motor: Permanent magnet direct drive motor/Three phase asynchronous motor/Direct drive motor
- 转子材质：喷涂碳化钨/氧化锆/聚氨酯
  Rotor material: sprayed tungsten carbide/zirconia/polyurethane





喷涂碳化钨
Sprayed Tungsten Carbide



聚氨酯
Polyurethane



氧化锆
Zirconium Oxide

型号 Model	研磨槽净容量 Grinding chamber net capacity (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)	加工批量 Batch processing (L)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
NT-V6	4.7	0.2-2.0	15	20-150	≈500	1200×960×1800
NT-V10	9.3	0.2-2.0	22	30-300	≈700	1250×1000×1800
NT-V30	25	0.2-2.0	45	100-1000	≈1800	1650×1100×1900
NT-V60	57	0.2-2.0	75	200-2000	≈3500	2300×1500×2000
NT-V100	99	0.2-2.0	132	500-4000	≈5200	2900×1800×2600
NT-V150	145	0.2-2.0	160	800-6000	≈6600	2900×1800×2600
NT-V400	400	0.2-2.0	355	2000-10000	≈12500	4150×1950×2850
NT-V500	500	0.2-2.0	400	3000-12000	≈13000	4150×1950×2850
NT-V700	700	0.2-2.0	500	3000-18000	≈17000	5100×2000×2700
NT-V1000	1000	0.2-2.0	650	5000-30000	≈20000	5600×2150×2200
NT-V1500	1500	0.2-2.0	900	4500-40000	≈27000	5130/8230×2250×2400

应用行业 / Application industries

磷酸铁锂、固态电解质、磁性材料、电子陶瓷、陶瓷墨水、纳米新材料、氧化铝、生物制剂、医药、农药、化妆品等领域

Lithium iron phosphate, solid electrolytes, magnetic materials, electronic ceramics, ceramic ink, nano new materials, alumina, biologics, pharmaceuticals, pesticides, cosmetics and other fields

NT-VS DUAL POWER CENTRIFUGAL NANO BEAD MILL

NT-VS 双动力离心纳米砂磨机

2022年12月入选东莞市首台(套)重点技术装备项目；采用(无筛网)离心分离原理设计、研磨与分离独立运行，研磨细度可达100nm以下，研磨更加精细彻底,单位时间内的有效产出是普通砂磨机的2-3倍，具有超广泛的应用范围。

Selected as the first (set) key technical equipment project in Dongguan City in December 2022; Designed using the principle of centrifugal separation (without a sieve), the grinding and separation operate independently, with a grinding fineness of up to 100nm. The grinding is more precise and thorough, and the effective output per unit time is 2-3 times that of ordinary sand mills, with a wide range of applications.

技术指标 / Technical indicators

出料粒径：50-300nm　Discharge particle size：50-300nm

粘度：≤2000cps　Viscosity：≤2000cps

研磨介质：0.05-0.6mm　Grinding media：0.05-0.6mm

研磨结构：棒销式　Grinding structure：Pin-Type

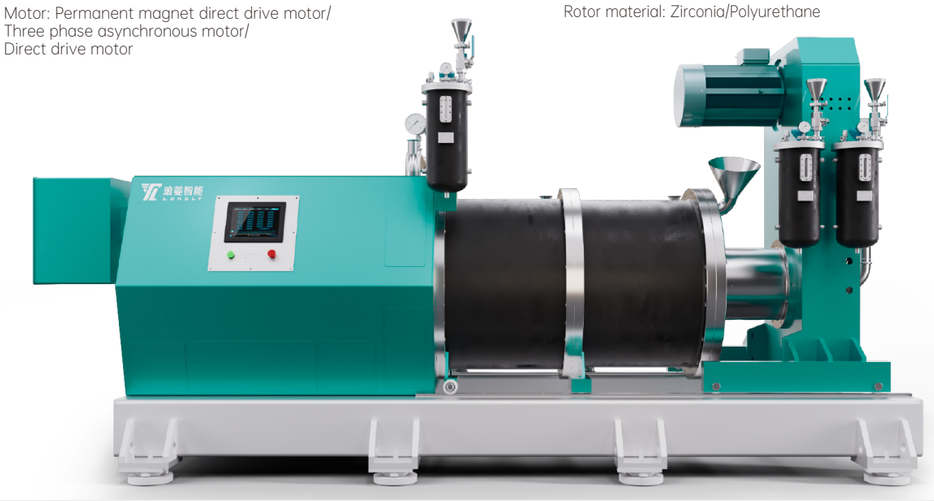
分离系统：离心分离　Separation system: Centrifugal separation

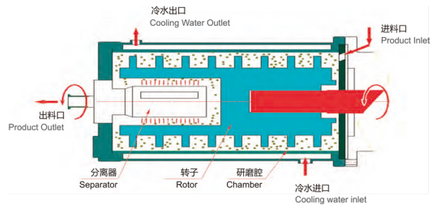
产品特性 / Product Features

- 棒销式转子高能量密度，研磨介质分布均匀无死角，产品颗粒小且分布窄
  Rod pin rotor with high energy density, uniform distribution of grinding medium without dead corners, small and narrow distribution of product particles
- 搭载专利强制冷却系统，有效控制出料温度，保障物料稳定性
  Equipped with patented forced cooling system, effectively controls discharge temperature and ensures material stability
- 设计适用于大流量生产(连续式或循环式)
  Designed for high flow production (continuous or cyclic)
- 双动力物料研磨与物料分离独立运行
  Dual power material grinding and material separation operate independently
- 离心式分离无筛网，不堵料
  Centrifugal separation without screen, no clogging of materials
- 可使用0.05mm以上的锆珠，研磨细度可达50纳米以上，普遍满足高端物料的研磨需求
  Zirconium beads with a diameter of 0.05mm or more can be used, and the grinding fineness can reach over 50 nanometers, which generally meets the grinding needs of high-end materials
- 是100纳米细度实施稳定量产为数不多的机器
  It is one of the few machines that implements stable mass production with a fineness of 100 nanometers
- 采用德国技术机械密封，杜绝泄漏风险，稳定性好
  Adopting German technology mechanical seals to eliminate leakage risks and ensure good stability
- 可选永磁直驱电机，效率高、节能约 10%；标配电机可用380V/690V，可定制高压款；直驱结构规避皮带传动缺陷，降噪减耗更可靠
  Optional permanent magnet direct drive motor with high efficiency and about 10% energy saving; the standard motor supports 380V/690V and high-voltage customized version is available. The direct drive structure avoids the defects of belt transmission, featuring lower noise, reduced energy consumption and higher reliability.

可选配置 / Optional configuration

- 溶剂体系：水性/油性
  Solvent system: Water-based/Solvent-based
- 电 机: 永磁直驱电机/三相异步电动机/直驱电机
  Motor: Permanent magnet direct drive motor/ Three phase asynchronous motor/ Direct drive motor
- 内筒材质：氧化锆/碳化硅/聚氨酯
  Inner chamber material: Zirconium oxide/ Silicon carbide/Polyurethane
- 转子材质：氧化锆/聚氨酯
  Rotor material: Zirconia/Polyurethane





研磨离心分离系统：

无网离心分离设计 + 独立动力电机，利用离心力与泵压的精准控制，实现锆珠锁留、物料强制排出，高效分离无堵塞。

Centrifugal Separating System：

Screenless centrifugal separation design + independent power motor, with precise control of centrifugal force and pump pressure to lock beads inside and force materials out, achieving high-efficiency separation without clogging.

型号 Model	研磨槽净容量 Grinding chamber net capacity (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)	加工批量 Batch processing (L)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
NT-V5S	5	0.05-0.6	22.5	15-50	≈1200	1280×870×1850
NT-V10S	9.5	0.05-0.6	30	30-150	≈1600	2550×1100×1750
NT-V30S	25	0.05-0.6	53	60-400	≈2000	3150×1300×1650
NT-V60S	60	0.05-0.6	106	150-800	≈3500	3900×1450×1950
NT-V150S	150	0.05-0.6	183	300-2000	≈7280	5100×1650×2300
NT-V400S	400	0.1-0.6	378	1000-5000	≈15000	7160×1850×2850
NT-V1000S	1000	0.1-0.6	695	3000-12000	≈22000	9000×2150×2400

应用行业 / Application industries

硅碳负极、石墨烯、电解液、喷墨、陶瓷墨水、氧化铝、MLCC/LTCC、氧化铝、电池浆料、纳米新材料等领域

Silicon-carbon anode, graphene, electrolyte, inkjet printing, ceramic ink, alumina, MLCC/LTCC, battery slurry, nano new materials and other fields

NT-X TURBO NANO BEAD MILL

NT-X 涡轮式纳米砂磨机

适用于中低粘度物料的纳米级研磨，属于高流量柔性研磨范畴，出料粒径集中，不破坏物料形貌，全陶瓷/PU研磨材质零污染，实践案例超过2000L每小时，在碳纳米管领域优势尤为凸显。

Suitable for nanoscale grinding of low to medium viscosity materials, belonging to the category of high flow flexible grinding. The discharge particle size is concentrated and does not damage the material morphology. The all ceramic/PU grinding material has zero pollution, with practical cases exceeding 2000L/hour. Its advantages are particularly prominent in the field of carbon nanotubes.

技术指标 / Technical indicators

出料粒径：200nm-2μm　Discharge particle size：200nm-2μm

粘度：≤10000cps　Viscosity：≤10000cps

研磨介质：0.3-2mm　Grinding media：0.3-2mm

研磨结构：涡轮式　Grinding structure：Turbo-Type

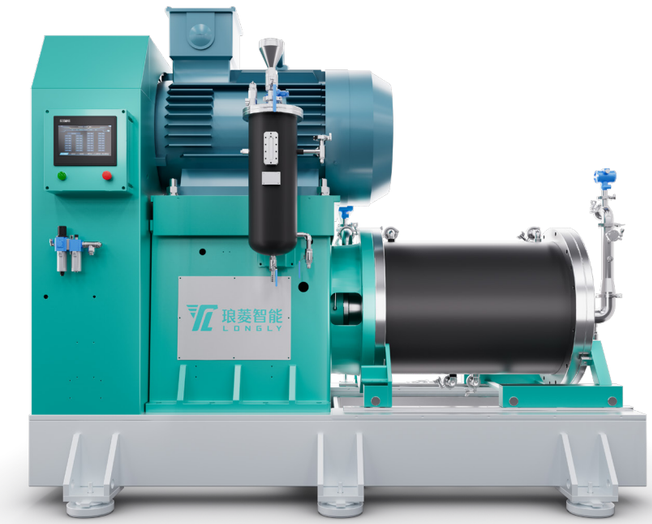
分离系统：筛网/陶瓷片分离　Separation system: Screen/ceramic separation

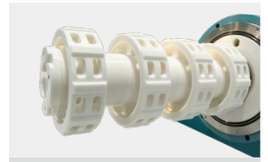
产品特性 / Product Features

- 采用两段式研磨结构，前端特殊转子强力研磨，后端涡轮离心高效出料
  Two-stage grinding: powerful grinding by a special rotor at the front end and turbo centrifugal discharge at the rear end
- 柔性研磨工艺，高效温和，完整保留物料形貌与结构
  Flexible grinding, efficient and gentle, ensuring intact morphology and structure of materials
- 支持筛网、陶瓷片两种分离方式，出料通畅流量大
  Supports two separation methods: screen mesh and ceramic sheet, with smooth discharge and high flow rate
- 可选配永磁直驱电机，无皮带传动，运行更平稳
  Optional permanent magnet direct drive motor, belt-free and smooth operation
- 设计适用于大流量生产(连续式或循环式)
  Designed for high flow production (continuous or cyclic)
- 可使用0.3mm以上的锆珠，研磨细度可达200纳米以上，普遍满足高端物料的研磨需求
  Zirconium beads with a diameter of 0.3mm or more can be used, and the grinding fineness can reach over 200 nanometers, which generally meets the grinding needs of high-end materials
- 搭载专利强制冷却系统，有效控制出料温度，保障物料稳定性
  Equipped with patented forced cooling system, effectively controls discharge temperature and ensures material stability
- 采用德国技术机械密封，杜绝泄漏风险，稳定性好
  Adopting German technology mechanical seals to eliminate leakage risks and ensure good stability

可选配置 / Optional configuration

- 溶剂体系：水性/油性/NMP
  Solvent system: Water-based/Solvent-based/NMP
- 转子材质：氧化锆/耐磨钢
  Rotor material: Zirconia/wear-resistant steel
- 内筒材质：氧化锆/聚氨酯
  Inner chamber material: Zirconia/Polyurethane
- 电 机：三相异步电机
  Motor: Three phase asynchronous motor





氧化锆 / Zirconium oxide



耐磨钢 / wear-resistant steel

型号 Model	研磨槽净容量 Grinding chamber net capacity (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)	加工批量 Batch processing (L)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
NT-X1	1	0.3-2.0	3.7	1.6-1.7	≈230	1000×700×1100
NT-X3	3	0.3-2.0	15	30-100	≈700	1100×750×1750
NT-X5	5	0.3-2.0	15	30-100	≈700	1100×750×1750
NT-X10	12	0.3-2.0	22	100-200	≈1000	1600×900×1850
NT-X30	30	0.3-2.0	37	40-400	≈1560	1700×1050×1950
NT-X90	90	0.3-2.0	90	400-2000	≈3600	2200×1200×2300
NT-X150	150	0.3-2.0	160	800-3000	≈5600	4300×1450×1950

应用行业 / Application industries

碳纳米管、钛酸钡、碳酸钡、钛白粉、氧化铝、氧化锆、喷墨油墨、打印机油墨、锆钛酸铅陶瓷（PZT）、MLCC/LTCC、催化剂、变阻器等

Carbon nanotubes, barium titanate, barium carbonate, titanium dioxide, alumina, zirconia, inkjet ink, printer ink, lead zirconate titanate ceramics (PZT), MLCC/LTCC, catalysts, rheostats, etc

LS-K DUAL POWER VERTICAL NANO BEAD MILL

LS-K 双动力立式纳米砂磨机

立式无死角研磨、研磨细度小，离心式无筛网分离装置。琅菱"LS-K"系列是一款双动力立式纳米砂磨机，采用创新的双电机独立驱动技术——分离轮与转子分别由各自独立的主轴及电机控制，互不干扰。这一突破性设计使其能够稳定实现50-300nm的超细纳米研磨。

Vertical no dead angle grinding, small grinding fineness, centrifugal no screen separation device. The LONGLY "LS-K" series is a dual power vertical nano bead mill that uses innovative dual motor independent drive technology - the separation wheel and rotor are controlled by their own independent main shafts and motors, without interfering with each other. This breakthrough design enables it to achieve stable ultrafine nano grinding of 50-300nm.

● 技术指标 / Technical indicators

出料粒径：50-300nm Discharge particle size：50-300nm

研磨介质：0.03-0.3mm Grinding media：0.03-0.3mm

粘度：≤3000cps Viscosity：≤3000cps

分离系统：离心分离 Separation system: Centrifugal separation

研磨结构：新型涡盘/棒销式 Grinding structure：New type of vortex disc/Pin-Type

● 产品特性 / Product Features

- 双核双驱动设计，转子与分离轮分别由独立电机驱动、独立调速互不干扰，使用超细锆珠时可有效防止漏珠
  Dual-core & dual-drive: The rotor and separator wheel are driven by separate motors with independent speed control. When using ultra-fine zirconia beads, bead leakage is effectively prevented
- 立式无死角结构，腔体垂直布置，物料自下而上研磨，消除沉积死角，批次一致性好
  Vertical dead-angle-free structure with a vertically arranged chamber. Materials are ground from bottom to top, eliminating deposition dead zones and ensuring excellent batch consistency
- 研磨结构可选新型涡盘或棒销式，适配不同物料，灵活匹配
  The grinding structure can be selected as a new type of ortex disc or rod pin, which is adaptable to different materials and can be flexibly matched
- 采用德国技术双端面机械密封，有效杜绝泄漏，运行稳定可靠
  Adopting German technology for double end mechanical seals, effectively preventing leaks and ensuring stable and reliable operation
- 可使用0.03mm以上的锆珠，研磨细度可达50纳米以上，普遍满足高端物料的研磨需求
  Zirconium beads with a diameter of 0.03mm or more can be used, and the grinding fineness can reach over 50 nanometers, which generally meets the grinding needs of high-end materials
- 采用离心式无筛网分离装置，停车时锆球沉降于分离轮底部，从根源避免起动跑球问题
  Adopting a centrifugal sieve free separation device, the zirconium balls settle at the bottom of the separation wheel during parking, avoiding the problem of starting and running balls from the root

- 装置无堵塞、免维护，研磨锆球可长时间使用，无需额外筛珠工序，大幅降低运维成本
  The device is unobstructed and maintenance free, and the grinding zirconium balls can be used for a long time without the need for additional bead screening processes, greatly reducing operation and maintenance costs
- 针对超细介质，采用离心式无筛网珠料分离，有双重止回阀，防止介质倒流和堵塞
  For ultrafine media, centrifugal sieve free bead separation is adopted, with dual check valves to prevent medium backflow and blockage
- 搭载专利强制冷却系统，有效控制出料温度，保障物料稳定性
  Equipped with patented forced cooling system, effectively controls discharge temperature and ensures material stability

● 可选配置 / Optional configuration

- 溶剂体系：水性/油性
  Solvent system: Water-based/Solvent-based
- 内筒材质：氧化锆/碳化硅/聚氨酯
  Inner chamber material: Zirconia/Silicon Carbide /Polyurethane
- 转子材质：氧化锆/聚氨酯
  Rotor material: Zirconia/Polyurethane
- 电 机: 永磁直驱电机/三相异步电动机
  Motor: Permanent magnet direct drive motor /Three phase asynchronous motor



型号 Model	研磨槽净容量 Grinding chamber net capacity (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)	加工批量 Batch processing (L)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
LS-K2	1.4	0.03-0.3	15	3-30	≈800	1250×1150×2050
LS-K7	5.1	0.03-0.3	27	30-200	≈1700	1900×1200×2300/2800
LS-K10	7.6	0.03-0.3	30	50-300	≈1800	1900×1200×2350/2900
LS-K20	20	0.03-0.3	49	50-600	≈2800	2050×1250×2550/3250

● 应用行业 / Application industries

钛酸钡、MLCC、电子陶瓷、氧化锆、氧化硅、催化剂、高端电容、半导体、锂电池正负极浆料（磷酸铁锂）等前沿产业

Barium titanate, MLCC, electronic ceramics, zirconia, silica, catalysts, high-end capacitors, semiconductors, lithium battery positive and negative electrode slurries (lithium iron phosphate) and other cutting-edge industries

LS-Q SINGLE POWER VERTICAL NANO BEAD MILL

LS-Q 单动力立式纳米砂磨机

立式无死角研磨、研磨细度小，离心式无筛网分离装置。琅菱"LS-Q"系列是一款单动力立式纳米砂磨机，采用创新的离心式无筛网珠料分离装置，能够稳定实现50-300nm的超细纳米级研磨。该系列设备以"单核单动力"为核心设计理念，结构简洁高效，是琅菱智能在高端纳米研磨领域的重要产品之一。

Vertical no dead angle grinding, high grinding fineness, centrifugal no screen separation device. The LONGLY "LS-Q" series is a single power vertical nano sand mill that uses an innovative centrifugal sieve free bead separation device to stably achieve ultrafine nano scale grinding of 50-300nm. This series of equipment is designed with the core concept of "single core single power", with a simple and efficient structure. It is one of the important products of Langling Intelligent in the high-end nano grinding field.

技术指标 / Technical indicators

出料粒径：50-300nm Discharge particle size：50-300nm

研磨介质：0.03-0.3mm Grinding media：0.03-0.3mm

粘度：≤3000cps Viscosity：≤3000cps

分离系统：离心分离 Separation system: Centrifugal separation

研磨结构：新型涡盘/棒销式 Grinding structure：New type of vortex disc/Pin-Type

产品特性 / Product Features

- 立式无死角设计，腔体垂直布置，物料自下而上研磨，消除沉积死角，批次一致性好
  Vertical design with no dead corners, vertical arrangement of cavities, material grinding from bottom to top, eliminating sedimentation dead corners, and good batch consistency
- 研磨结构可选新型涡盘或棒销式，适配不同物料，灵活匹配
  The grinding structure can be selected as a new type of scroll or rod pin, which is adaptable to different materials and can be flexibly matched
- 可选配永磁直驱电机驱动，运行平稳噪音低，高效节能
  Optional permanent magnet direct drive motor drive, smooth operation with low noise, efficient and energy-saving
- 采用德国技术双端面机械密封，有效杜绝泄漏，运行稳定可靠
  Adopting German technology for double end mechanical seals, effectively preventing leaks and ensuring stable and reliable operation
- 设计适用于大流量生产(连续式或循环式)
  Designed for high flow production (continuous or cyclic)
- 采用离心式无筛网分离装置，停车时锆球沉降于分离轮底部，从根源避免起动跑球问题
  Adopting a centrifugal sieve free separation device, the zirconium balls settle at the bottom of the separation wheel during parking, avoiding the problem of starting and running balls from the root
- 装置无堵塞、免维护，研磨锆球可长时间使用，无需额外筛珠工序，大幅降低运维成本
  The device is unobstructed and maintenance free, and the grinding zirconium balls can be used for a long time without the need for additional bead screening processes, greatly reducing operation and maintenance costs
- 针对超细介质，采用离心式无筛网珠料分离，有双重止回阀，防止介质倒流和堵塞
  For ultrafine media, centrifugal sieve free bead separation is adopted, with dual check valves to prevent medium backflow and blockage
- 可使用0.03mm以上的锆珠，研磨细度可达50纳米以上，普遍满足高端物料的研磨需求
  Zirconium beads with a diameter of 0.03mm or more can be used, and the grinding fineness can reach over 50 nanometers, which generally meets the grinding needs of high-end materials
- 搭载专利强制冷却系统，有效控制出料温度，保障物料稳定性
  Equipped with patented forced cooling system, effectively controls discharge temperature and ensures material stability

可选配置 / Optional configuration

- 溶剂体系：水性/油性
  Solvent system: Water-based/Solvent-based
- 内筒材质：氧化锆/碳化硅/聚氨酯
  Inner chamber material: Zirconia /Silicon Carbide/Polyurethane
- 转子材质：氧化锆/聚氨酯
  Rotor material: Zirconia/Polyurethane
- 电 机: 永磁直驱电机/三相异步电动机
  Motor: Permanent magnet direct drive motor/ Three phase asynchronous motor



型号 Model	研磨槽净容量 Grinding chamber net capacity (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)	加工批量 Batch processing (L)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
LS-Q2	1.4	0.03-0.3	7.5	3-20	≈650	1080×950×1520
LS-Q3	3	0.03-0.3	15	30-150	≈1050	1400×1000×2050
LS-Q5	3.8	0.03-0.3	15	30-200	≈1200	1400×1000×2050
LS-Q20	17.5	0.03-0.3	37	50-600	≈2400	1900×1450×2000
LS-Q30	30	0.03-0.3	45	100-800	≈2600	2100×1600×2000/2800
LS-Q90	90	0.03-0.3	110	300-3000	≈6500	2450×1150×2650/3700
LS-Q150	150	0.05-0.3	185	500-5000	≈9500	2900×1600×3300/4500
LS-Q500	450	0.05-0.3	450	1000-15000	≈13000	3400×1800×3600/5200
LS-Q1000	1000	0.05-0.3	650	5000-20000	≈23000	4300×3000×4200/6200

应用行业 / Application industries

钛酸钡、MLCC、电子陶瓷、氧化锆、氧化硅、催化剂、高端电容、半导体、锂电池正负极浆料（磷酸铁锂）等前沿产业

Barium titanate MLCC、 Frontier industries such as electronic ceramics, zirconia, silicon oxide, catalysts, high-end capacitors, semiconductors, and lithium battery positive and negative electrode slurries (lithium iron phosphate)

NT-VE HORIZONTAL & VERTICAL DUAL-POWER NANO BEAD MILL

NT-VE 立卧式双动力纳米砂磨机

琅菱开发出立卧兼容型砂磨机，即卧式研磨，立式出料，结合卧式研磨及立式出料的共同优点，既保证了研磨的高效率和高品质，又具有立式在锆球分离的优点。琅菱匠心研发打造，行业首创机型，使用0.3mm以下的锆球时有显著优势。从实验型号，到量产的推荐机型。

LONGLY has developed a vertical and horizontal compatible bead mill, which combines the advantages of horizontal grinding and vertical discharge, ensuring high efficiency and quality of grinding while also having the advantage of vertical separation of zirconium balls. Langling is meticulously developed and crafted, the industry's first model, with significant advantages when using zirconium balls below 0.3mm. From laboratory models to recommended mass-production models.

技术指标 / Technical indicators

出料粒径：30-600nm　Discharge particle size：30nm-600nm

粘度：≤3000cps　Viscosity：≤3000cps

研磨介质：0.03-0.6mm　Grinding media：0.03-0.6mm

研磨结构：棒销式　Grinding structure：Pin-Type

分离系统：离心分离　Separation system: centrifugal separation

产品特性 / Product Features

- 集合立式料球分离优势+卧式高效率研磨，让立卧式的效率高+ 平稳性尤为突出
  Combining the advantages of vertical material ball separation and horizontal high-efficiency grinding, the high efficiency and smoothness of vertical and horizontal grinding are particularly prominent
- 分离转子与分散转子独立控制，调节灵活，可根据不同物料调节转速或分散转速
  Separate rotor and dispersed rotor are independently controlled, with flexible adjustment, and can adjust the speed or dispersed speed according to different materials
- 采用立式+离心出料方式，使用0.3mm以下锆球，可稳定运行，可生产出高质量纳米颗粒
  Adopting a vertical and centrifugal discharge method, using zirconium balls below 0.3mm, it can operate stably and produce high-quality nanoparticles
- 立式出料无筛网设计，停机沉降不堵，降低跑球风险，减少维护工作量与成本
  Vertical discharge without screen design, no blockage caused by settling during shutdown, reducing the risk of ball running and minimizing maintenance workload and costs
- 可选永磁直驱电机，能效提升运行平稳
  Optional permanent magnet direct drive motor for improved energy efficiency and smooth operation

可选配置 / Optional configuration

- 溶剂体系：水性/油性
  Solvent system: Water-based/Solvent-based
- 内筒材质：氧化锆/聚氨酯/碳化硅
  Inner chamber material: Zirconia/Polyurethane/Silicon carbide
- 转子材质：喷涂碳化钨/氧化锆/聚氨酯
  Rotor material: sprayed tungsten carbide/zirconia/polyurethane
- 电 机: 永磁直驱电机/三相异步电动机/直驱电机
  Motor: Permanent magnet direct drive motor/Three phase asynchronous motor/Direct drive motor



型号 Model	研磨槽净容量 Grinding chamber net capacity (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)	加工批量 Batch processing (L)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
NT-V10E	10	0.03-0.6	22.5	15-50	≈1000	1600×1000×1900
NT-V30E	30	0.03-0.6	67	60-600	≈2000	2000×1200×1900
NT-V60E	60	0.03-0.6	97	150-800	≈4000	2300×1500×2500
NT-V150E	150	0.03-0.6	190	300-2000	≈7000	2900×1650×2800
NT-V400E	400	0.1-0.6	400	1000-5000	≈13000	5100×2000×3200
NT-V1000E	1000	0.1-0.6	695	3000-8000	≈20000	5600×2150×3500

应用行业 / Application industries

锂电池材料（硅碳负极，LFP等）、电子陶瓷/MLCC、5G/半导体、油漆、油墨、粘合剂、喷墨墨水、隔热涂料、农药、医药、化妆品、纳米硅、硅酸锆、氧化锆、氧化硅、磁性材料等行业

Industries such as lithium battery materials (Silicon-carbon Anode, LFP, etc.), electronic ceramics/MLCC, 5G/semiconductors, paints, inks, adhesives, inkjet inks, thermal insulation coatings, pesticides, pharmaceuticals, cosmetics, nano silicon, zirconium silicate, zirconia, silicon oxide, magnetic materials, etc

LDM-C THE 3TH GENERATION PIN MICRON BEAD MILL

LDM-C 第三代棒销式微米砂磨机

升级版棒销式研磨结构，高配版动力系统，动力足，转速高，运行稳定，专利技术的动态筛网系统，实现大流量不堵塞，适用于中高粘度物料，以其卓越性能成为油漆、涂料、油墨研磨的理想之选。

Upgraded rod pin grinding structure, high-end power system, sufficient power, high speed, stable operation, patented technology dynamic screen system, achieving high flow without blockage, suitable for medium and high viscosity materials, and becoming an ideal choice for paint, coating, and ink grinding due to its excellent performance.

技术指标 / Technical indicators

出料粒径：5-15μm　Discharge particle size：5-15μm

粘度：≤20000cps　Viscosity：≤20000cps

研磨介质：0.6-2.0mm　Grinding media：0.6-2.0mm

研磨结构：棒销式　Grinding structure：Pin-Type

分离系统：动静环+动态筛网　Separation system: Stationary & Rotating Ring+Dynamic Screen

产品特性 / Product Features

- 与物料接触材料可选，不生锈，耐磨，确保浆料不变色
  Materials that come into contact with the material are optional, rust free, wear-resistant, and ensure that the slurry does not change color
- 专利技术的动态筛网珠料分离系统，大流量不堵塞，适用中高粘度的物料
  The dynamic screen bead separation system with patented technology has a high flow rate without blockage and is suitable for materials with medium to high viscosity
- 棒销式研磨结构，强化研磨珠对物料的冲击与剪切作用，大幅提升分散研磨效果
  Pin-type grinding structure enhances the impact and shearing force of grinding beads on materials, significantly improving dispersion and grinding efficiency.
- 采用德国技术双端面机械密封，有效杜绝泄漏，运行稳定可靠
  Adopting German technology for double end mechanical seals, effectively preventing leaks and ensuring stable and reliable operation
- 可使用0.6mm以上的锆珠，研磨细度可达5微米以上，普遍满足物料的研磨需求
  Zirconium beads with a diameter of over 0.6mm can be used, and the grinding fineness can reach over 5 microns, generally meeting the grinding needs of materials
- 搭载专利强制冷却系统，有效控制出料温度，保障物料稳定性
  Equipped with patented forced cooling system, effectively controls discharge temperature and ensures material stability

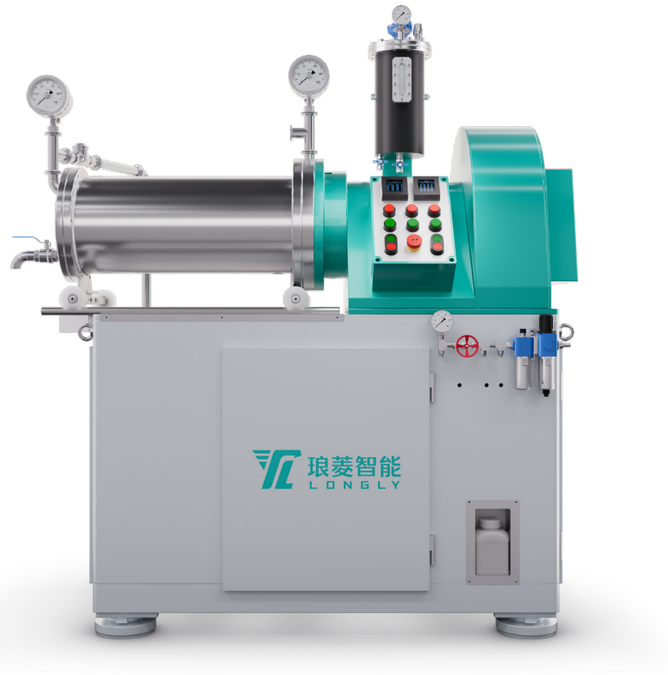
可选配置 / Optional configuration

- 溶剂体系：水性/溶剂
  Solvent system: Water-based/Solvent-based
- 转子材质：氧化锆/合金钢/聚氨酯
  Rotor material: Zirconia/Alloy Steel/Polyurethane
- 内筒材质：耐磨钢/碳化硅/聚氨酯
  Inner chamber material: Wear resistant steel/silicon carbide /Polyurethane
- 电 机：三相异步电动机
  Motor: Three phase asynchronous motor

应用行业
Application industries

涂料、油漆、特种油漆、溶剂油墨、颜料、色浆、染料、农药、磁性材料等

Coatings, paints, specialty paints, solvent inks, pigments, colorants, dyes, pesticides, magnetic materials, etc



型号 Model	研磨槽净容量 Grinding chamber net capacity (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)	加工批量 Batch processing (L)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
LDM-5C	5	0.6-2.0	11	30-200	≈900	1500×950×1750
LDM-10C	10	0.6-2.0	15	40-400	≈1000	1500×950×1750
LDM-20C	20	0.6-2.0	30	50-600	≈1200	1700×1050×1900
LDM-30C	30	0.6-2.0	37	100-900	≈1300	1700×1050×1900
LDM-50C	50	0.6-2.0	45	300-800	≈1700	2200×1200×1950
LDM-60C	60	0.6-2.0	45	200-1200	≈1800	2200×1200×1950
LDM-100C	100	0.6-2.0	75/90	300-2000	≈3000	2510×1320×2000

LDM-D THE 4TH GENERATION PIN MICRON BEAD MILL

LDM-D 第四代棒销式微米砂磨机

“低能耗、低成本、高产出”的杰出代表；升级版棒销式研磨结构，高配版动力系统，动力足，转速高，运行稳定；能使用更小的锆珠，是油漆、涂料、油墨研磨的理想选择。

Outstanding representative of "low energy consumption, low cost, high output"; Upgraded rod pin grinding structure, high-end power system, sufficient power, high speed, stable operation; Being able to use smaller zirconium beads is an ideal choice for grinding paints, coatings, and inks.

技术指标 / Technical indicators

出料粒径：1-15μm　Discharge particle size：1-15μm

粘度：≤20000cps　Viscosity：≤20000cps

研磨介质：0.3-2.0mm　Grinding media：0.3-2.0mm

研磨结构：棒销式　Grinding structure：Pin-Type

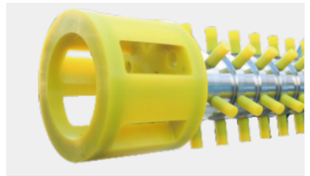
分离系统：静态筛网分离　Separation system: Static screen separation

产品特性 / Product Features

- 与物料接触材料可选，不生锈，耐磨，确保浆料不变色
  Materials that come into contact with the material are optional, rust free, wear-resistant, and ensure that the slurry does not change color
- 棒销式研磨结构，强化研磨珠对物料的冲击与剪切作用，大幅提升分散研磨效果
  Pin-type grinding structure enhances the impact and shearing force of grinding beads on materials, significantly improving dispersion and grinding efficiency.
- 采用德国技术双端面机械密封，有效杜绝泄漏，运行稳定可靠
  Adopting German technology for double end mechanical seals, effectively preventing leaks and ensuring stable and reliable operation
- 可使用0.3mm以上的锆珠，研磨细度可达1微米以上，普遍满足物料的研磨需求
  Zirconium beads with a diameter of over 0.3mm can be used, and the grinding fineness can reach over 1 microns, generally meeting the grinding needs of materials
- 搭载专利强制冷却系统，有效控制出料温度，保障物料稳定性
  Equipped with patented forced cooling system, effectively controls discharge temperature and ensures material stability

可选配置 / Optional configuration

- 溶剂体系：水性/溶剂
  Solvent system: Water-based/Solvent-based
- 转子材质：氧化锆/合金钢/聚氨酯
  Rotor material: Zirconia/Alloy Steel/Polyurethane
- 内筒材质：耐磨钢/碳化硅/聚氨酯
  Inner chamber material: Wear resistant steel/silicon carbide/Polyurethane
- 电 机: 三相异步电动机
  Motor: Three phase asynchronous motor



聚氨酯 / Polyurethane



氧化锆 / Zirconium oxide



型号 Model	研磨槽净容量 Grinding chamber net capacity (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)	加工批量 Batch processing (L)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
LDM-5D	5	0.3-2.0	11	30-200	≈900	1500×950×1750
LDM-10D	10	0.3-2.0	15	40-400	≈1000	1500×950×1750
LDM-20D	20	0.3-2.0	22	50-600	≈1200	1700×1050×1750
LDM-30D	30	0.3-2.0	30-37	100-900	≈1300	1700×1050×1850
LDM-50D	50	0.3-2.0	37/45	300-1000	≈1700	2200×1200×1700
LDM-60D	60	0.3-2.0	45	200-1200	≈1800	2200×1200×1700
LDM-100D	100	0.3-2.0	75/90	300-2000	≈3000	2510×1320×2000

应用行业 / Application industries

汽车涂料、防腐漆、溶剂油墨、颜料、水性色浆、染料、农药、磁性材料等

Automotive coatings, anti-corrosion paints, solvent inks, pigments, water-based colorants, dyes, pesticides, magnetic materials, etc

LDM-G PIN MICRON BEAD MILL

LDM-G 棒销式微米砂磨机

专为高粘度物料研制，升级版棒销式结构，高配动力系统，动力足，转速高，锆珠填充率高，冲击、剪切作用更强。特别适用于粘度高、难分散的物料，专利技术的动态筛网系统，大流量不堵塞,在色浆、油墨、颜料、染料、家具漆、汽车漆等领域优势凸出。

Specially developed for high viscosity materials, upgraded pin structure, high power system, sufficient power, high speed, high zirconium bead filling rate, stronger impact and shear effects. Specially suitable for materials with high viscosity and difficult dispersion, the patented dynamic screen system has advantages in areas such as colorants, inks, pigments, dyes, furniture paints, and automotive paints due to its high flow rate without clogging.

● 技术指标 / Technical indicators

出料粒径：5-15μm　Discharge particle size：5-15μm

粘度：≤20000cps　Viscosity：≤20000cps

研磨介质：0.8-2.0mm　Grinding media：0.8-2.0mm

研磨结构：棒销式　Grinding structure：Pin-Type

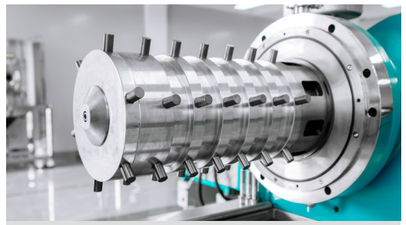
分离系统：动态筛网+动静环　Separation system: Dynamic screen+dynamic and static ring

● 产品特性 / Product Features

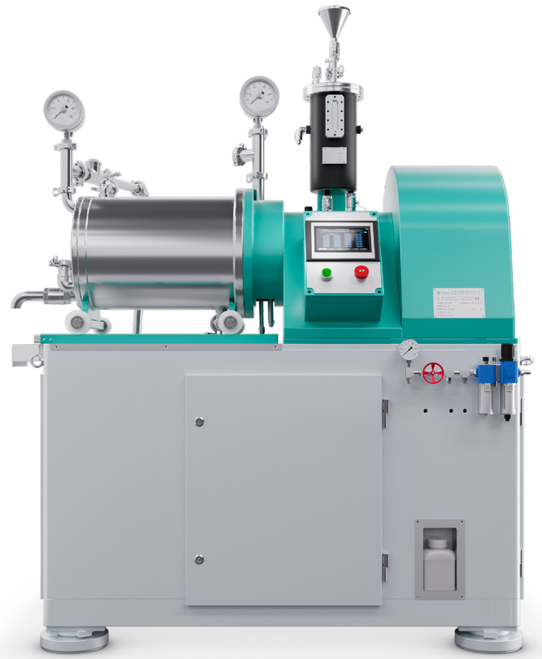
- 与物料接触材料可选，不生锈，耐磨，确保浆料不变色
  Materials that come into contact with the material are optional, rust free, wear-resistant, and ensure that the slurry does not change color
- 专利技术的动态筛网珠料分离系统，大流量不堵塞，适用高粘度的物料,特别适用UV油墨、胶印油墨等行业的理想选择
  The dynamic screen bead separation system with patented technology has a high flow rate without clogging, suitable for high viscosity materials, and is particularly ideal for industries such as UV ink and offset printing ink
- 加强棒销式研磨结构，强化研磨珠对物料的冲击与剪切作用，大幅提升分散研磨效果
  Strengthen the rod pin grinding structure, enhance the impact and shear effect of grinding beads on materials, and significantly improve the dispersion grinding effect
- 采用德国技术双端面机械密封，有效杜绝泄漏，运行稳定可靠
  Adopting German technology for double end mechanical seals, effectively preventing leaks and ensuring stable and reliable operation
- 可使用0.8mm以上的锆珠，研磨细度可达5微米以上，普遍满足物料的研磨需求
  Zirconium beads with a diameter of over 0.8mm can be used, and the grinding fineness can reach over 5 microns, generally meeting the grinding needs of materials
- 搭载专利强制冷却系统，有效控制出料温度，保障物料稳定性
  Equipped with patented forced cooling system, effectively controls discharge temperature and ensures material stability

● 可选配置 / Optional configuration

- 溶剂体系：水性/溶剂
  Solvent system: Water-based/Solvent-based
- 转子材质：合金钢
  Rotor material: Alloy steel
- 电 机: 三相异步电动机
  Motor: Three phase asynchronous motor
- 内筒材质：耐磨钢/碳化硅
  Inner chamber material: Wear resistant steel/Silicon carbide



耐磨钢 / Wear resistant Steel



型号 Model	研磨槽净容量 Grinding chamber net capacity (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)
LDM-20G	20	0.8-2.0	45
	加工批量 Batch processing (L)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
	50-600	≈1600	1730×1050×1950

● 应用行业 / Application industries

主要面向胶版/网版/凹版/柔版印刷油墨、UV固化油墨、高固含浓缩油墨、颜料、染料、涂料以及高粘度产品等领域

Mainly targeting the fields of offset/screen/gravure/flexographic printing ink, UV cured ink, high solid concentration ink, pigments, dyes, coatings, and high viscosity products

LDM-BD THE 5TH GENERATION DISC & PIN MICRON BEAD MILL

LDM-BD 第五代盘棒式微米砂磨机

第五代盘棒式微米砂磨机，融合盘棒式与棒销式结构的双重优势。适用于中低粘度浆料的大流量连续生产，兼顾分散效率与研磨细度；对比LDM-D效率提升20%~40%。

The 5th Generation Disc & Pin-Type Bead Mill, combining the dual advantages of disc-rod and pin-type structures. It is suitable for high-flow continuous production of medium and low viscosity slurries, balancing dispersion efficiency and grinding fineness; efficiency is increased by 20%~40% compared with the LDM-D model.

技术指标 / Technical indicators

出料粒径：1-25μm　Discharge particle size：1-25μm

粘度：≤15000cps　Viscosity：≤15000cps

研磨介质：0.4-2.0mm　Grinding media：0.4-2.0mm

研磨结构：盘棒式　Grinding structure：Disc & Pin-Type

分离系统：筛网分离　Separation system: Screen separation

产品特性 / Product Features

- 盘棒片与棒销有序排列结合，融合双重研磨优势，研磨效率大幅提升
  The orderly arrangement of disc and pins combines dual grinding advantages, greatly improving grinding efficiency
- 适配连续大流量生产场景，单位时间处理量大，满足规模化生产需求
  Suitable for continuous high-flow production scenarios with large throughput per unit time, meeting large-scale production needs
- 采用动态转子分离技术，出料过程稳定顺畅，杜绝堵塞问题
  Dynamic rotor separation technology ensures stable and smooth discharge, eliminating clogging issues
- 配备研磨内外桶冷却、机封冷却保护系统，冷却面积最大化，保障设备稳定运行
  Equipped with cooling systems for both inner and outer grinding barrels and mechanical seals, maximizing the cooling area to ensure stable equipment operation
- 设备易清洗、换色速度快，多品种生产切换方便，适配柔性生产需求
  Easy to clean and quick to change colors, enabling convenient multi-product switching to meet flexible production needs

可选配置 / Optional configuration

- 溶剂体系：水性/油性
  Solvent system: Water-based/Solvent-based
- 转子材质：氧化锆/耐磨钢/聚氨酯
  Rotor material: Zirconia/Wear resistant Steel/Polyurethane
- 内筒材质：碳化硅/聚氨酯
  Inner chamber material: Silicon carbide/Polyurethane
- 电 机: 三相异步电动机
  Motor: Three phase asynchronous motor



型号 Model	研磨槽净容量 Grinding chamber net capacity (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)	加工批量 Batch processing (L)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
LDM-5BD	5	0.4-2.0	11	30-200	≈900	1300×1050×1750
LDM-10BD	10	0.4-2.0	15	40-400	≈1000	1300×1050×1750
LDM-20BD	20	0.4-2.0	22	50-600	≈1200	1500×1050×1750
LDM-30BD	30	0.4-2.0	37	100-800	≈1300	1700×1050×1850
LDM-50BD	50	0.4-2.0	45	200-1000	≈1700	2200×1200×1700
LDM-60BD	60	0.4-2.0	45	200-1200	≈1800	2200×1200×1700
LDM-100BD	100	0.6-2.0	75	300-2000	≈3000	2510×1320×2000
LDM-150BD	150	0.6-2.0	90	600-3500	≈3200	2510×1320×2000

应用行业 / Application industries

汽车涂料、防腐漆、溶剂油墨、颜料、水性色浆、染料、农药、磁性材料等
Automotive coatings, anti-corrosion paints, solvent inks, pigments, water-based colorants, dyes, pesticides,magnetic materials, etc

LSM LARGE FLOW DISC BEAD MILL

LSM 大流量盘式砂磨机

经典不衰的畅销机型，微米级大流量设计，批量生产中优势更凸显；提供多种盘片结构及材质，根据客户的物料需求选择配置。

A classic and popular model with a micrometer level high flow design, highlighting its advantages in mass production; Provide a variety of disc structures and materials, and select configurations according to customer material requirements.

技术指标 / Technical indicators

出料粒径：5-25μm　Discharge particle size：5-25μm

粘度：≤12000cps　Viscosity：≤12000cps

研磨介质：0.4-2.5mm　Grinding media：0.4-2.5mm

研磨结构：盘片　Grinding structure：Disc-Type

分离系统：筛网分离/动静环分离　Separation system: Screen separation/Separation of dynamic and static rings

产品特性 / Product Features

- 与物料接触材料可选，不生锈，耐磨，确保浆料不变色
  Materials that come into contact with the material are optional, rust free, wear-resistant, and ensure that the slurry does not change color
- 可选配节能电机，能耗更低，更省电
  Optional energy-saving motor, lower energy consumption, more energy-efficient
- 设计适用于大流量生产
  Designed for high flow production
- 客户可以根据物料的特性，选择不同盘片：螺旋盘片/偏心盘片/四角盘片
  Customers can choose different discs based on the characteristics of the material: Spiral/Eccentric/Four-cornergrinding disc
- 客户可以根据物料选择不同分离系统：动态出料/筛网出料
  Customers can choose different separation systems based on materials: dynamic discharge/screen discharge
- 采用德国技术双端面机械密封，有效杜绝泄漏，运行稳定可靠
  Adopting German technology for double end mechanical seals, effectively preventing leaks and ensuring stable and reliable operation
- 可使用0.4mm以上的锆珠，研磨细度可达5微米以上，普遍满足物料的研磨需求
  Zirconium beads with a diameter of over 0.4mm can be used, and the grinding fineness can reach over 5 microns, generally meeting the grinding needs of materials
- 搭载专利强制冷却系统，有效控制出料温度，保障物料稳定性
  Equipped with patented forced cooling system, effectively controls discharge temperature and ensures material stability

可选配置 / Optional configuration

- 溶剂体系：水性/溶剂
  Solvent system: Water-based/Solvent-based
- 内筒材质：耐磨钢/碳化硅/聚氨酯/氧化锆
  Inner chamber material: Wear resistant steel/Silicon carbide/Polyurethane/Zirconia
- 转子材质：氧化锆/耐磨钢/聚氨酯
  Rotor material: Zirconia/Wear resistant Steel/Polyurethane
- 电 机: 三相异步电动机
  Motor: Three phase asynchronous motor



螺旋盘片
Spiral



偏心盘片
Eccentric



四角盘片
Four-cornergrinding disc



型号 Model	出料方式 Discharge method	研磨槽净容量 Grinding chamber net capacity (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)	加工批量 Batch processing (L)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
LSM-5A	动静环 Dynamic and Static Ring	5	0.6-2.0	7.5	20-150	≈500	900×750×1550
LSM-15A	动静环 Dynamic and Static Ring	15	0.6-2.0	15	40-500	≈1000	1180×900×1600
LSM-20A	动静环 Dynamic and Static Ring	20	0.6-2.0	18.5	50-600	≈1100	1350×900×1700
LSM-5B	静态筛网 Static screen	5	0.4-2.0	11	20-150	≈900	1300×900×1700
LSM-10B	静态筛网 Static screen	15	0.4-2.0	15	40-400	≈1000	1500×1050×1700
LSM-20B	静态筛网 Static screen	20	0.4-2.0	22	50-600	≈1100	1500×1050×1700
LSM-30B	静态筛网 Static screen	30	0.4-2.0	30	100-800	≈1300	1770×1050×1850
LSM-50B	静态筛网 Static screen	50	0.4-2.0	45	200-1000	≈1600	2200×1200×1700
LSM-60B	静态筛网 Static screen	60	0.4-2.0	45	200-1200	≈1700	2200×1200×1700
LSM-100B	静态筛网 Static screen	100	0.6-2.0	75	300-2000	≈2800	2510×1320×2000
LSM-150B	静态筛网 Static screen	150	0.6-2.0	90	600-3500	≈3200	2510×1320×2000
LSM-200B	静态筛网 Static screen	200	0.6-2.0	90	800-7000	≈4000	3800×1600×2000
LSM-300B	静态筛网 Static screen	300	0.6-2.0	110	1000-9000	≈4500	3800×1600×2000
LSM-500B	静态筛网 Static screen	560	0.6-2.5	200	1500-12000	≈6500	3600×1560×2200
LSM-1000B	静态筛网 Static screen	1000	0.6-2.5	355	2500-15000	≈11000	4470×1600×2850

应用行业 / Application industries

专为汽车涂料、家具漆、工业漆、印刷油墨、农药、颜料色浆、炭黑等多个行业设计

Specially designed for multiple industries such as automotive coatings, furniture paints, industrial paints, printing inks, pesticides, pigment pastes, carbon black, etc

LSM-BD HIGH-FLOW DISC & PIN MICRON BEAD MILL

LSM-BD 大流量盘棒式微米砂磨机

LSM-BD-大流量盘棒式微米砂磨机，融合盘片与棒销式结构的双重优势，适用于中低粘度浆料的大流量连续生产，兼顾分散效率与研磨细度。对比 LSM-B 型机，效率提升 10%~30%。

LSM-BD-High-Flow Disc & Rod Type Micron Sand Mill, combining the dual advantages of disc and pin-type structures. It is suitable for high-flow continuous production of medium and low viscosity slurries, balancing dispersion efficiency and grinding fineness. Compared with the LSM-B model, the efficiency is increased by 10%~30%.

技术指标 / Technical indicators

出料粒径：1-25μm　Discharge particle size：1-25μm

粘度：≤15000cps　Viscosity：≤15000cps

研磨介质：0.4-2.5mm　Grinding media：0.4-2.5mm

研磨结构：盘棒式　Grinding structure：Disc & Pin-Type

分离系统：筛网分离　Separation system: Screen separation

产品特性 / Product Features

- 盘棒片与棒销有序排列结合，融合双重研磨优势，研磨效率大幅提升
  The orderly arrangement of disc rods and pins combines dual grinding advantages, greatly improving grinding efficiency
- 适配连续大流量生产场景，单位时间处理量大，满足规模化生产需求
  Suitable for continuous high-flow production scenarios with large throughput per unit time, meeting large-scale production needs
- 采用动态转子分离技术，出料过程稳定顺畅，杜绝堵塞问题
  Dynamic rotor separation technology ensures stable and smooth discharge, eliminating clogging issues
- 配备研磨内外桶冷却、机封冷却保护系统，冷却面积最大化，保障设备稳定运行
  Equipped with cooling systems for both inner and outer grinding barrels and mechanical seals, maximizing the cooling area to ensure stable equipment operation
- 设备易清洗、换色速度快，多品种生产切换方便，适配柔性生产需求
  Easy to clean and quick to change colors, enabling convenient multi-product switching to meet flexible production needs

可选配置 / Optional configuration

- 溶剂体系：水性/油性
  Solvent system: Water-based/Solvent-based
- 内筒材质：碳化硅/聚氨酯
  Inner chamber material: Silicon carbide/Polyurethane
- 转子材质：氧化锆/耐磨钢/聚氨酯
  Rotor material: Zirconia/Wear resistant Steel/Polyurethane
- 电 机: 三相异步电动机
  Motor: Three phase asynchronous motor



型号 Model	研磨槽净容量 Grinding chamber net capacity (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)	加工批量 Batch processing (L)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
LSM-5BD	5	0.4-2.0	11	30-200	≈900	1300×1050×1750
LSM-10BD	15	0.4-2.0	15	40-400	≈1000	1300×1050×1750
LSM-20BD	20	0.4-2.0	22	50-600	≈1200	1500×1050×1750
LSM-30BD	30	0.4-2.0	37	100-800	≈1300	1700×1050×1850
LSM-50BD	50	0.4-2.0	45	200-1000	≈1700	2200×1200×1700
LSM-60BD	60	0.4-2.0	45	200-1200	≈1800	2200×1200×1700
LSM-100BD	100	0.6-2.0	75/90	300-2000	≈3000	2510×1320×2000
LSM-150BD	150	0.6-2.0	90	600-3500	≈3200	2510×1320×2000
LSM-500BD	560	0.6-2.5	160	1500-12000	≈6500	3600×1560×2200
LSM-1000BD	1000	0.6-2.5	355	4000-23000	≈12000	4470×1600×2850

应用行业 / Application industries

汽车涂料、防腐漆、溶剂油墨、颜料、水性色浆、染料、农药、磁性材料等
Automotive coatings, anti-corrosion paints, solvent inks, pigments, water-based colorants, dyes, pesticides, magnetic materials, etc

LBM BASKET BEAD MILL

LBM 篮式砂磨机

独特篮式旋转设计，研磨效率高、换色清洗便捷、节省人工，适配多品种小批量生产；砂磨机在运行中，涡轮和棒销同时带动研磨介质运动而产生摩擦和剪切力使物料得以研磨和分散，配合网孔动态离心分离出料，棒销过流面积大、分离效果佳，设备使用寿命长。

Unique basket style rotating design, high grinding efficiency, convenient color change and cleaning, labor-saving, suitable for small batch production of multiple varieties; During the operation of the bead mill, the turbine and rod pin simultaneously drive the grinding medium to generate friction and shear forces, allowing the material to be ground and dispersed. Combined with dynamic centrifugal separation of the mesh, the rod pin has a large flow area, excellent separation effect, and a long service life of the equipment.

技术指标 / Technical indicators

出料粒径：5-25μm　Discharge particle size：5-25μm

粘度：≤15000cps　Viscosity：≤15000cps

研磨介质：1.6-3.0mm　Grinding media：1.6-3.0mm

研磨结构：篮式　Grinding structure：Basket

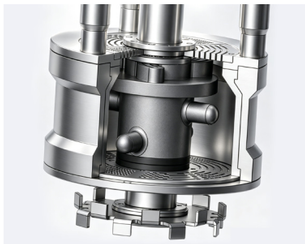
分离系统：篮式筛网分离　Separation system: Basket screen separation

产品特性 / Product Features

- 高线速度研磨
  High linear speed grinding
- 模块化结构设计、紧凑，液压升降
  Modular structure design, compact, hydraulic lifting
- 变速驱动系统（皮带传动）的机器可使主轴的转速多样化，因此机器能满足不同物料研磨时所需的速度
  The machine with variable speed drive system (belt drive) can diversify the spindle speed, so the machine can meet the speed required for grinding different materials
- 研磨腔中的物料温度的变化可通过温度计显示，实时监测
  The temperature changes of the material in the grinding chamber can be displayed by a thermometer and monitored in real time
- 为了达到好的研磨效果，选择的研磨介质的规格及材料要适当
  In order to achieve good grinding results, the specifications and materials of the selected grinding medium should be appropriate
- 可实现手动 / 气动 / 电动三模式升降研磨篮子，操作简单快捷
  It can realize manual/pneumatic/electric three mode lifting grinding basket, which is easy and fast to operate
- 一体化工艺，将预混和研磨合二为一，减少实验步骤和样品物料浪费
  Integrated process, combining pre mixing and grinding into one, reducing experimental steps and sample material waste

可选配置 / Optional configuration

- 溶剂体系：水性/油性
  Solvent system: Water-based/Solvent-based
- 转子材质：耐磨钢
  Rotor material: Wear-resistant steel
- 篮子材质：SUS304(添加耐磨工艺)
  Basket material: SUS304(with wear-resistant process added)
- 电 机: 三相异步电动机
  Motor: Three phase asynchronous motor



研磨物料循环示意图
Schematic Diagram of Grinding Material Circulation



型号 Model	研磨槽净容量 Grinding chamber net capacity (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)	加工批量 Batch processing (L)	重量 Weight (kg)	升降方式 Lifting method	外形尺寸 Overall dimensions (mm)
LBM-T2	0.2	1.6-2.5	0.37	1-3	≈75	手动/气动 Manual/Pneumatic	610×410×550
LBM-T3	3	1.6-2.0	3.0	20-35	≈350	液压升降 Hydraulic lift	700×1350×1600
LBM-T5	5	1.6-3.0	7.5	40-50	≈450	液压升降 Hydraulic lift	750×1600×1900
LBM-T20	20	1.6-3.0	22	450-500	≈2000	液压升降 Hydraulic lift	1300×2700×2900
LBM-T40	40	1.8-3.0	37	700-1200	≈2800	液压升降 Hydraulic lift	3000×1700×4000

应用行业 / Application industries

涂料、油墨、色浆、染料、化肥等品种繁多的物料，如乳胶漆、工业漆、色浆、水墨、悬浮液，化肥等

Various types of materials such as coatings, inks, color pastes, dyes, fertilizers, etc., such as latex paint, industrial paint, color pastes, ink, suspensions, fertilizers, etc

GSY DRY BEAD MILL

GSY 干法砂磨机

打破传统湿法研磨局限、省去干燥工序，干法砂磨机是一种无需液体介质，直接对干燥粉体进行超细研磨、分散与解聚的高效设备，核心是通过研磨介质（如陶瓷珠）的高速撞击、剪切与摩擦实现物料细化。

Breaking the limitations of traditional wet grinding and eliminating the drying process, the dry bead mill is an efficient equipment that directly grinds, disperses, and depolymerizes dry powders without the need for liquid media. The core is to achieve material refinement through high-speed impact, shear, and friction of grinding media (such as ceramic beads).

技术指标 / Technical indicators

出料粒径：2-15μm　Discharge particle size：2-15μm

研磨介质：1.8-10mm　Grinding media：1.8-10mm

研磨结构：棒销式　Grinding structure：Pin structure

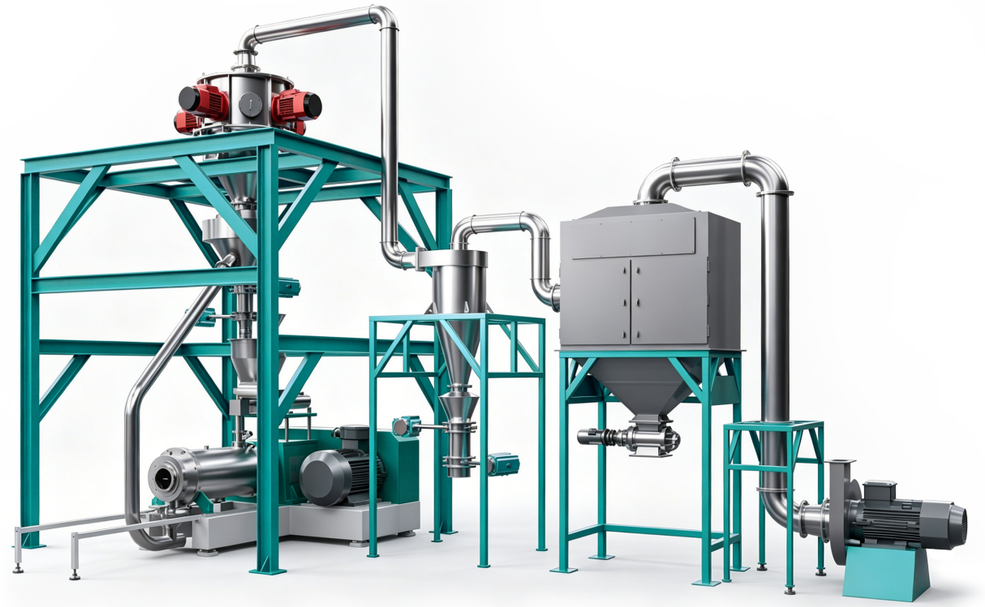
分离系统：筛网分离　Separation system: Screen separation

产品特性 / Product Features

- 腔体配置多通道循环冷却，散热效果好，可精准控温，杜绝热敏物料变性
  The chamber is equipped with multi-channel circulating cooling, which has good heat dissipation effect, precise temperature control, and prevents thermal sensitive materials from denaturing
- 集成式转子研磨结构，融合推料、撞击、剪切和自磨三重作用，比球磨机效率高，细度在D50: 2-10μm更有优势
  Integrated rotor grinding structure, integrating the triple effects of pushing, impact, shearing, and self grinding, with higher efficiency than ball mills and advantages in fineness of D50: 2-10 μm
- 内置专利分离系统，允许使用小至1.8mm的研磨介质，防止粉料团聚，获取精准出料细度
  Built in patented separation system allows the use of grinding media as small as 1.8mm to prevent powder agglomeration and achieve precise discharge fineness
- 独特气密封设计，有效阻挡粉体逸出，杜绝跑出现象
  Unique gas seal design effectively prevents powder from escaping and eliminates the phenomenon of running out
- 采用先进风送系统，抑制粉尘产生和飞扬，环保零污染，改善工作环境
  Adopting advanced air delivery system to suppress dust generation and flying, environmentally friendly and zero pollution, and improve working environment
- 大型设备搭载分级功能，满足细度要求可直接收集成品，将颗粒大进行二次循环研磨，确保粒度均匀
  Large equipment is equipped with grading function, which can directly collect finished products to meet the fineness requirements. The larger particles are subjected to secondary cycle grinding to ensure uniform particle size
- 本设备可单机循环研磨使用，也可与分级机，旋风收集器，脉冲除尘器等设备配套使用
  This device can be used for single machine cyclic grinding, and can also be used in conjunction with classifiers, cyclone collectors, pulse dust collectors, and other equipment

可选配置 / Optional configuration

- 转子材质：SUS304/氧化锆
  Rotor material: SUS304/Zirconia
- 内筒材质：碳化硅
  Inner chamber material: Silicon carbide
- 电 机：防爆变频电机/永磁防爆变频电机
  Motor: Explosion proof Variable Frequency Motor/Permanent Magnet Explosion proof Variable Frequency Motor



型号 Model	有效容积 Effective volume (L)	介质尺寸 Medium size (mm)	电机功率 Motor power (kW)	产能 Production capacity (kg/h)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
GSY-1L	1	1.8-3	4	2-10	≈160	700×650×650
GSY-2L	2	1.8-3	5.5	4-15	≈200	920×750×800
GSY-5L	5	1.8-3	7.5	10-25	≈700	1240×600×1580
GSY-10L	10	1.8-3	15	20-50	≈950	1300/1830×760×1500
GSY-50L	50	3-5	30	40-100	≈1600	1930/2780×960×1650
GSY-100L	100	3-8	55	100-200	≈2600	2390/3860×2010×1570
GSY-125L	125	3-8	55	120-250	≈3200	2540/3870×2010×1570
GSY-250L	250	3-10	110	200-500	≈4800	3300/4850×2250×1800
GSY-500L	500	5-10	200	600-1200	≈10000	3600/5800×2400×1400

应用行业 / Application industries

适用于碳粉、玻璃粉、氧化铝、碳酸钙、二氧化硅、石英砂、锂电材料、钠电材料等广泛物料的粉碎，细度范围D50范围在2μm至15μm之间

Suitable for crushing a wide range of materials such as carbon powder, glass powder, alumina, calcium carbonate, silica, quartz sand, lithium battery materials, sodium battery materials, etc., with a fineness range D50 between 2 μm and 15 μm

GRINDING MEDIA - ZIRCONIA BEADS

研磨介质-锆珠

Item	L65	L80	L95
化学成分 Chemical composition	ZrO_2>65%	ZrO_2>80%	ZrO_2>95%
真密度 True density	4.0g/cm³	6.2g/cm³	6g/cm³
堆积密度 Bulk density	2.5g/cm³	3.82g/cm³	3.7g/cm³
压碎强度 Crushing strength	> 1.8KN(Φ2mm)	> 2KN(Φ2mm)	> 2KN(Φ2mm)
莫氏硬度 Mohs hardness	7.2	9	9
磨耗率 Wear rate	< 0.5%	< 0.1%	< 0.0001%

规格 Specification	规格 Specification	规格 Specification
Φ0.05+0.02	Φ0.1+0.03/-0.02	Φ0.3+0.1/-0.05
0.2-0.4	0.4-0.6	0.6-0.8
0.8-1.0	1.0-1.2	1.2-1.4
1.4-1.6	1.6-1.8	1.8-2.0



L95 钇稳定氧化锆珠 / L95 Yttria-Stabilized Zirconia Beads

采用氧化钇稳定工艺，为高纯度、高强度、高密度的球状颗粒，耐强酸强碱，磨耗率低，对设备磨损小，特别适用于高附加值产品的研磨场景。

Made with yttria stabilization, these high-purity, high-strength, high-density spherical beads are resistant to strong acids and alkalis. They feature low wear rates and minimal equipment abrasion, making them ideal for high-value product applications.



L80 铈稳定氧化锆珠 / L80 Ceria-Stabilized Zirconia Beads

以氧化铈为稳定剂，经滴定成型、高温焙烧定相工艺制成。珠子微观结构致密、密度更高，适配高固相、难分散物料的分散与研磨。

Produced via titration forming and sintering phase stabilization with ceria as the stabilizer. The beads have a dense microstructure and high density, suitable for dispersion and grinding of high-solid-content, hard-to-disperse materials.



L65 硅酸锆珠 / L65 Zirconia Silicate Beads

采用电解液滴定成型、高温烧结定相工艺制备，由高密度硅酸锆微粒构成，磨耗率极低，是中低粘度浆料研磨的高性价比经济型研磨介质。

Manufactured by electrolyte titration forming and high-temperature sintering phase stabilization, these beads are composed of high-density zirconia silicate particles with extremely low wear rates. They are a cost-effective grinding media for medium- and low-viscosity slurries.

LMT GANTRY PLANETARY MIXER

LMT 龙门式行星搅拌机



采用龙门式双立柱结构（容积通常大于350L），设计稳固、平衡性出色，特别适合大批量的连续化生产，并能便捷地集成到自动化产线中。

Adopting a gantry style double column structure (usually with a capacity greater than 350L), the design is stable and has excellent balance, making it particularly suitable for large-scale continuous production and easy integration into automated production lines.

● 产品特性 / Product Features

- LMT 龙门式行星搅拌机：采用龙门式双立柱对称结构，机架结构强度高、平衡度高，整机运行稳定，满足大规模量产需求
  LMT gantry planetary mixer: adopting a gantry double column symmetrical structure, the frame structure has high strength and balance, and the whole machine runs stably, meeting the needs of large-scale production

- MT 悬臂式行星搅拌机：结构紧凑，占地面积小，厂房利用率高，灵活适配中小试车间和大规模生产需求；设备覆盖2升到650升容量，从实验室小试到批量产一机贯通，混合效果可直接复制到量产
  MT cantilever planetary mixer: compact structure, small footprint, high factory utilization rate, flexible adaptation to small and medium-sized test rooms and large-scale production needs; The equipment covers a capacity of 2 liters to 650 liters, from laboratory trials to mass production with one machine connected, and the mixing effect can be directly replicated to mass production

- 高速分散+低速搅拌，可变频调速，在公转自转下，桶内四周物料上下翻腾、内外循环，均匀混合
  High speed dispersion+low-speed stirring, variable frequency speed regulation, under the rotation of the drum, the materials around the drum are stirred up and down, circulated inside and outside, and evenly mixed

- 采用独家专利内捏合行星桨，3D 一体成型+ CNC 精密加工，扇形弧面设计带来更大接触面积，前后强力导流，搅拌更均匀充分
  Adopts patented internal kneading planetary paddle, 3D integrated forming + CNC precision machining. The fan-shaped cambered surface ensures a large contact area with strong front and rear flow guidance, delivering more thorough mixing

- 采用高度模块化设计，实现基本零件标准化，有效降低批量生产成本，提升供货效率
  Adopting highly modular design to achieve standardization of basic components, effectively reducing batch production costs and improving supply efficiency

- 箱体与行星架经计算机仿真优化，材料采用铸钢/高碳钢焊接并退火处理，承载能力强
  The casing and planetary carrier have been optimized through computer simulation, and the materials used are cast steel/high carbon steel welded and annealed, with strong load-bearing capacity

- 自带喷淋系统，桨叶表面光滑无焊缝无死角，搅拌桨及行星架底面清洗便捷
  Equipped with a spray system, the blade surface is smooth without any welds or dead corners, and the mixing blade and planetary carrier bottom are easy to clean

- 三重油封保障（骨架油封+迷宫双层油封+防粉尘油封），避免上筒体漏油污染材料
  Triple oil seal protection (skeleton oil seal+labyrinth double-layer oil seal+dust-proof oil seal), to avoid material contamination caused by oil leakage from the upper cylinder

- 可根据客户工艺与物料特性，量身定制刮壁刮底、PLC 控制、ATEX 防爆、精准控温等配置
  Configurations can be customized according to customers' processes and materials, including wall & bottom scraping, PLC control, ATEX explosion protection, temperature control, etc

- 提供丰富配件可选，可与我司其他设备灵活组合，搭建完整生产线及系统解决方案
  A wide range of accessories are available, which can be flexibly combined with other equipment of our company to form a complete production line or system

MT CANTILEVER PLANETARY MIXER

MT 悬臂式行星搅拌机



采用单柱悬垂式设计（容积通常小于650L），搅拌桶三面敞开，结构紧凑，占地面积小巧，移动与布局灵活便捷，覆盖从实验室研发、中小试到规模化量产的全流程应用。

Adopting a single column suspended design (usually with a capacity of less than 650L), the mixing drum is open on three sides, with a compact structure, small footprint, flexible and convenient movement and layout, covering the entire process application from laboratory research and development, small and medium-sized testing to large-scale production.

型号 Model	使用容积/设计容积 Usage volume /design volume (L)	外形 Shape	搅拌电机 Mixing motor (kW)	搅拌桨转速 Mixing blade speed (r/min)	分散电机 Decentralized motor (kW)	分散转速 Dispersed rotational speed (r/min)	分散线速度 Dispersion line speed (m/s)	升降方式 lifting method (m/s)
LMT-1000	1000/1460	龙门 Gantry	75	5-31	75	200-1400	22	液压 Hydraulic
LMT-1200	1200/2032	龙门 Gantry	90	5-30	90	200-1350	22	液压 Hydraulic
LMT-1500	1500/2312	龙门 Gantry	110	5-28	110	200-1300	22	液压 Hydraulic
MT-2	2/3.8	悬臂 Cantilever	0.75	0-80	1.1	300-6400	0-13.5	电动 Electric
MT-5	5/7.4	悬臂 Cantilever	1.1	5-68	1.5	0-5800	15.2	电动 Electric
MT-10	10/14	悬臂 Cantilever	1.5	5-63	2.2	0-5000	17	电动 Electric
MT-30	30/44	悬臂 Cantilever	4	5-64	5.5	200-4085	20	电动 Electric
MT-60	60/88	悬臂 Cantilever	7.5	5-52	11	200-3500	20.5	液压 Hydraulic
MT-100	100/149	悬臂 Cantilever	11	5-45	15	200-3000	21	液压 Hydraulic
MT-200	200/301	悬臂 Cantilever	18.5	5-42	22	200-2250	21.5	液压 Hydraulic
MT/LMT -350	350/435	悬臂/龙门 Cantilever/Gantry	30	5-41	37	200-2033	21.5	液压 Hydraulic
MT/LMT -650	650/822	悬臂/龙门 Cantilever/Gantry	45	5-40	55	200-1480	21	液压 Hydraulic

● 应用行业 / Application industries

碳锂电池液、电子浆料、电极浆料、聚氨酯密封剂、硅酮密封剂、粘合剂、药膏、食品、化妆品、制药、油墨、建材、电子、颜料、农药等

Lithium battery fluid, electronic paste, electrode paste, polyurethane sealant, silicone sealant, adhesive, ointment, food, cosmetics, pharmaceuticals, ink, building materials, electronics, pigments, pesticides, etc

CENTRIFUGAL SPRAY DRYER

离心式喷雾干燥机

专为连续化、大批量、高品质粉体生产设计的离心式喷雾干燥机，依靠高速离心转盘将料液雾化成均匀微滴，与热风瞬时接触干燥，处理量大、能耗低、操作弹性大、不易堵塞、适合低、中固含量物料，成品粒度均匀、流动性好，适用于各类易干燥、高产能需求物料，广泛应用于食品香精、乳粉、植物提取物、原料药、中间体、催化剂、陶瓷粉、氧化铝、氧化锆、锂电正负极材料、化工原料、肥料、农药等行业。

Centrifugal spray dryers specifically designed for continuous, large-scale, high-quality powder production. These dryers atomize liquid materials into uniform microdroplets via high-speed centrifugal disks, enabling instantaneous contact drying with hot air. They feature high processing capacity, low energy consumption, great operational flexibility, and resistance to clogging. Suitable for materials with low to medium solid content, they produce powders with uniform particle size and excellent flowability, making them ideal for easily dried materials with high productivity demands. Widely used in industries such as food flavors, milk powder, plant extracts, active pharmaceutical ingredients, intermediates, catalysts, ceramic powders, alumina, zirconia, lithium battery cathode and anode materials, chemical raw materials, fertilizers, and pesticides.

技术指标 / Technical indicators

机型：小型机 / 中型机 / 大型机　Model: Small Model / Medium Model / Large Model

雾化方式：高速离心雾化 / 低速离心雾化　Atomization method: High-speed centrifugal atomization / Low-speed centrifugal atomization

产品粒径：D50：20-150μm，分布窄、均匀性好　Product particle size: D50:20-150μm, narrow distribution, good uniformity

物料收集：可选本体 / 旋风 / 高精度袋滤器　Material collection: Optional body/cyclone/high-precision bag filter

热源：电加热 / 燃气加热 / 蒸汽等　Heat source: electric heating / Gas heating / steam, etc

产品特性 / Product Features

- 大型机可选配余热回收装置，大幅降低能耗、节约成本
  Large scale machines can be equipped with waste heat recovery devices, which significantly reduce energy consumption and save costs

- 高速离心雾化技术，以 20–50 μm 为主的液滴粒径细且分布窄，粉末细、均匀性好、比表面积大，溶解性与分散性极佳、松装密度低；液滴细、蒸发强度高，干燥极快、含水率低，塔内停留时间短，产品品质高
  High-speed centrifugal atomization technology features fine and narrow-distribution droplet size mainly ranging from 20 to 50 μm, resulting in fine powder with good uniformity, large specific surface area, excellent solubility and dispersibility, and low bulk density. With fine droplets and high evaporation intensity, it achieves extremely fast drying, low moisture content, and short residence time in the tower, ensuring high product quality

- 低速离心雾化技术，液滴粒径偏大（50–150 μm 甚至更大），产品颗粒粗、球形度佳、流动性好、松装密度大；液滴大、蒸发强度低，干燥时间更长，适配造粒、重粉及高固含量物料生产
  Low speed centrifugal atomization technology, with larger droplet sizes (50-150 μ m or even larger), resulting in coarse particles, good sphericity, good flowability, and high bulk density of the product; Large droplets Low evaporation intensity, longer drying time, suitable for granulation, heavy powder and high solid content material production

- 智能省心操作，PID 闭环控制实现进料、温度、转速一键联动，搭配防呆互锁保护，大幅降低操作失误率
  Intelligent and effortless operation: PID closed-loop control realizes one-key linkage of feeding, temperature and rotating speed, with foolproof interlock protection to significantly reduce operation error rate

技术与参数 / Technology & Parameters

应用行业
Application industries

食品香精、乳粉、植物提取物、原料药、中间体、催化剂、陶瓷粉、氧化铝、氧化锆、锂电正负极材料、化工原料、肥料、农药等

Food essence, milk powder, plant extracts, APIs, intermediates, catalysts, ceramic powders, alumina, zirconia, lithium anode and cathode materials, chemical raw materials, fertilizers, pesticides, etc



型号 Model	类型 Type	雾化方式 Atomization method	收集方式 Collection method	塔体内径 Inner diameter of the tower (mm)	蒸发量 Evaporation (kg/h)
SR-X-1600(10kg)	小型机 Small-scale machine	离心式 Centrifugal type	旋风分离器 Cyclone separator	1600	10
SR-XD-1600(10kg)	小型机 Small-scale machine	离心式 Centrifugal type	旋风分离器+袋滤器 Cyclone separator+Bag filter	1600	10
SR-D-1600(10kg)	小型机 Small-scale machine	离心式 Centrifugal type	袋滤器 Bag filter	1600	10
MR-XD-2500(30kg)	中型机 Medium-size machine	离心式 Centrifugal type	旋风分离器+袋滤器 Cyclone separator+Bag filter	2500	30
MR-XW-2500(30kg)	中型机 Medium-size machine	离心式 Centrifugal type	旋风分离器+水膜除尘器 Cyclone separator+water film dust collector	2500	30
MR-D-2500(30kg)	中型机 Medium-size machine	离心式 Centrifugal type	袋滤器 Bag filter	2500	30
BR-XD-6000(500kg)	大型机 Large-scale machine	离心式 Centrifugal type	旋风分离器+袋滤器 Cyclone separator+Bag filter	6000	500
BR-XW-6000(500kg)	大型机 Large-scale machine	离心式 Centrifugal type	旋风分离器+水膜除尘器 Cyclone separator+water film dust collector	6000	500
BR-D-6000(500kg)	大型机 Large-scale machine	离心式 Centrifugal type	袋滤器 Bag filter	6000	500
BR-XD-14000(20000kg)	大型机 Large-scale machine	离心式 Centrifugal type	旋风分离器+袋滤器 Cyclone separator+Bag filter	14000	20000
BR-XW-14000(20000kg)	大型机 Large-scale machine	离心式 Centrifugal type	旋风分离器+水膜除尘器 Cyclone separator+water film dust collector	14000	20000
BR-D-14000(20000kg)	大型机 Large-scale machine	离心式 Centrifugal type	袋滤器 Bag filter	14000	20000

PRESSURE SPRAY DRYER
压力式喷雾干燥机

专为大批量、连续化粉体生产设计的压力式喷雾干燥机，高压泵（0.4–20 MPa）将料液压入旋流室，高速旋转后从喷嘴喷出形成锥形液膜，再撕裂成雾滴与热空气快速换热干燥，结构简单、能耗适中、可造粒、易维护，广泛应用于化工、食品、医药、陶瓷、电池材料、催化剂等领域。

A pressure spray dryer specially designed for mass and continuous powder production. The high-pressure pump (0.4 – 20 MPa) hydraulically feeds the material into the swirl chamber. After rotating at high speed, it sprays out from the nozzle to form a conical liquid film, which is then torn into droplets and heated air for rapid heat exchange and drying. With simple structure, moderate energy consumption, granulation and easy maintenance, it is widely used in chemical, food, medicine, ceramics, battery materials, catalysts and other fields.

技术指标 / Technical indicators

- 机型：中型机 / 大型机　Model: Medium Model / Large Model
- 雾化方式：单喷嘴 / 多喷嘴并行　Atomization method: Single nozzle / multi nozzle parallel
- 产品粒径：D50：50-300μm，通过压力与喷嘴孔径调节　Product particle size: D50：50-300μm, Adjust through pressure and nozzle aperture
- 物料收集：可选本体 / 旋风 / 高精度袋滤器　Material collection: Optional body/cyclone/high-precision bag filter
- 热源：电加热 / 燃气加热 / 蒸汽等　Heat source: electric heating / Gas heating / steam, etc

产品特性 / Product Features

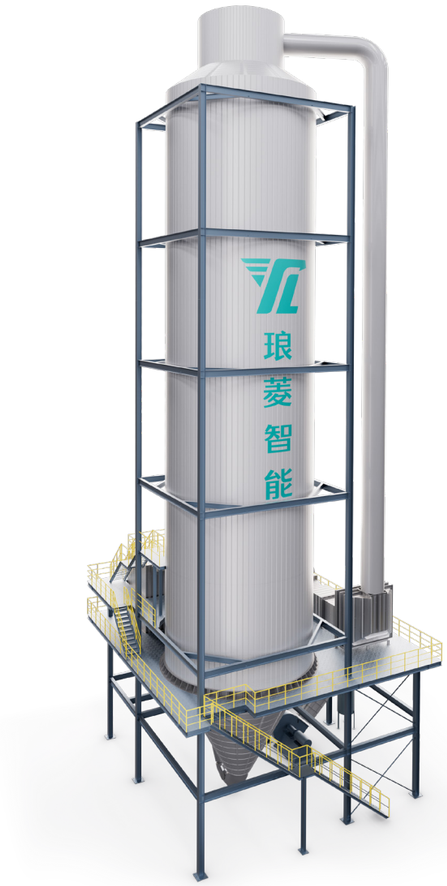
- 可选配余热回收装置，大幅降低能耗、节约成本
  Optional waste heat recovery device can significantly reduce energy consumption and save costs
- 系统结构简单，建设成本低，安装与维护便捷；调试难度低，流量均匀可控，故障率低且备件需求少，运行稳定省心
  The system features a simple structure with low construction cost and easy installation and maintenance. It is easy to commission with uniform and controllable flow, low failure rate and minimal spare parts requirements for worry-free stable operation
- 多枪并联实现大产量生产，单枪孔径可做小型化设计，支持制备速溶假性团聚颗粒；雾场分布均匀，可实现单枪独立启停，生产调节弹性大
  Parallel multi-nozzle design enables high-capacity production. The small single-nozzle aperture supports the production of instant pseudo-agglomerated particles with uniform spray distribution. Independent start/stop of each nozzle provides great flexibility for production adjustment
- 采用 PID 闭环控制技术，进料、温度、转速参数一键联动；配备防呆互锁保护，大幅降低操作失误率，生产过程安全高效
  Equipped with PID closed-loop control for one-button linkage of feed, temperature and speed parameters. With foolproof interlock protection, it significantly reduces operator error rates for safe and efficient production

技术与参数 / Technology & Parameters

应用行业
Application industries

化工原料、陶瓷粉、肥料、农药（颗粒）、食品原料、植脂末、电池材料、树脂、无机粉体等

Chemical raw materials, ceramic powders, fertilizers, pesticides (granules), food raw materials, vegetable fat powder, battery materials, resins, inorganic powders, etc



型号 Model	类型 Type	雾化方式 Atomization method	收集方式 Collection method	塔体内径 Inner diameter of the tower (mm)	蒸发量 Evaporation (kg/h)
MP-XD-2500(50kg)	中型机 Medium-size machine	压力式 Pressure type	旋风分离器+袋滤器 Cyclone separator+Bag filter	2500	50
MP-XW-2500(50kg)	中型机 Medium-size machine	压力式 Pressure type	旋风分离器+水膜除尘器 Cyclone separator+water film dust collector	2500	50
MP-D-2500(50kg)	中型机 Medium-size machine	压力式 Pressure type	袋滤器 Bag filter	2500	50
BP-XD-6000(1000kg)	大型机 Large-scale machine	压力式 Pressure type	旋风分离器+袋滤器 Cyclone separator+Bag filter	6000	1000
BP-XW-6000(1000kg)	大型机 Large-scale machine	压力式 Pressure type	旋风分离器+水膜除尘器 Cyclone separator+water film dust collector	6000	1000
BP-D-6000(1000kg)	大型机 Large-scale machine	压力式 Pressure type	袋滤器 Bag filter	6000	1000
BP-XD-10000(3000kg)	大型机 Large-scale machine	压力式 Pressure type	旋风分离器+袋滤器 Cyclone separator+Bag filter	10000	3000
BP-XW-10000(3000kg)	大型机 Large-scale machine	压力式 Pressure type	旋风分离器+水膜除尘器 Cyclone separator+water film dust collector	10000	3000
BP-D-10000(3000kg)	大型机 Large-scale machine	压力式 Pressure type	袋滤器 Bag filter	10000	3000

AIR FLOW SPRAY DRYER

气流式喷雾干燥机

高速压缩空气 / 蒸汽（200–340m/s）与料液在喷嘴混合，靠气液速度差产生剪切力撕裂液滴，特别适合小流量、超细粉体需求，广泛用于实验室研发、小批量生产及热敏性、特殊物料干燥。适用领域医药原料药、中间体、香精香料、植物提取物、催化剂、超细陶瓷粉、特种化工材料、热敏性物料等。

High speed compressed air/steam (200-340 m/s) is mixed with the material liquid at the nozzle, and the shear force generated by the gas-liquid velocity difference tears the liquid droplets. It is particularly suitable for small flow rate and ultrafine powder requirements, and is widely used in laboratory research and development, small batch production, thermal sensitivity, and special material drying. Applicable fields: pharmaceutical APIs, intermediates, essence and fragrances, plant extracts, catalysts, ultrafine ceramic powders, special chemical materials, heat sensitive materials, etc.

技术指标 / Technical indicators

机型：小型机 / 中型机 / 大型机　Model: Small / Medium / Large

雾化方式：二流体 / 三流体喷嘴，多种口径可选　Atomization method: Two fluid / three fluid nozzle, available in multiple calibers

产品粒径：5-100μm　Product particle size: 5-100μm

物料收集：可选本体 / 旋风 / 高精度袋滤器　Material collection: Optional body / cyclone / high-precision bag filter

热源：电加热 / 燃气加热等　Heat source: electric heating / Gas heating / etc

产品特性 / Product Features

- 可选配余热回收装置，大幅降低能耗、节约成本
  Optional waste heat recovery device can significantly reduce energy consumption and save costs

- 二流体雾化采用 1 路气体 + 1 路料液，粒径较细可达5-20μm，结构简单、成本低、易维护，适用范围广，可满足常规物料通用干燥
  Two fluid atomization uses one gas and one liquid feed, with a particle size of up to 5-20 μm. It has a simple structure, low cost, easy maintenance, and a wide range of applications, which can meet the general drying needs of conventional materials

- 三流体雾化可采用 2 气 1 液或 2 液 1 气模式，更低气压即可实现强剪切效果，雾滴更细更均匀，粒径可达 5–100 μm，产量大；高粘度物料、膏体不易堵塞喷嘴，低气压下仍表现优异，2 液 1 气模式还可实现液滴包覆
  Three-fluid atomization can be operated in 2-gas & 1-liquid or 2-liquid & 1-gas mode. Strong shearing can be achieved at lower air pressure, producing finer and more uniform droplets with a size of 5–100 μm and higher output. It is resistant to nozzle clogging for high-viscosity materials and pastes, and performs well even at low air pressure. The 2-liquid & 1-gas mode enables droplet coating

- 极细雾滴粒径 1–100 μm，可通过气液比灵活调节，轻松获得球形度高、流动性好的超细粉体
  Ultra-fine droplets with a size of 1–100 μm can be adjusted via the gas-liquid ratio, easily producing ultra-fine powder with high sphericity and good flowability

技术与参数 / Technology & Parameters

应用行业
Application industries

医药原料药、中间体、香精香料、植物提取物、催化剂、超细陶瓷粉、特种化工材料、热敏性物料等

Pharmaceutical APIs, intermediates, essence and fragrances, plant extracts, catalysts, ultrafine ceramic powders, special chemical materials, heat sensitive materials, etc



型号 Model	类型 Type	雾化方式 Atomization method	收集方式 Collection method	塔体内径 Inner diameter of the tower (mm)	蒸发量 Evaporation (kg/h)
SL-X-1600(10kg)	小型机 Small-scale machine	气流式 Airflow type	旋风分离器 Cyclone separator	1600	10
SL-XD-1600(10kg)	小型机 Small-scale machine	气流式 Airflow type	旋风分离器+袋滤器 Cyclone separator+Bag filter	1600	10
SL-D-1600(10kg)	小型机 Small-scale machine	气流式 Airflow type	袋滤器 Bag filter	1600	10
ML-XD-2500(50kg)	中型机 Medium-size machine	气流式 Airflow type	旋风分离器+袋滤器 Cyclone separator+Bag filter	2500	50
ML-XW-2500(50kg)	中型机 Medium-size machine	气流式 Airflow type	旋风分离器+水膜除尘器 Cyclone separator+water film dust collector	2500	50
ML-D-2500(50kg)	中型机 Medium-size machine	气流式 Airflow type	袋滤器 Bag filter	2500	50
BL-XD-6000(1000kg)	大型机 Large-scale machine	气流式 Airflow type	旋风分离器+袋滤器 Cyclone separator+Bag filter	6000	1000
BL-XW-6000(1000kg)	大型机 Large-scale machine	气流式 Airflow type	旋风分离器+水膜除尘器 Cyclone separator+water film dust collector	6000	1000
BL-D-6000(1000kg)	大型机 Large-scale machine	气流式 Airflow type	袋滤器 Bag filter	6000	1000
BL-XD-8000(4000kg)	大型机 Large-scale machine	气流式 Airflow type	旋风分离器+袋滤器 Cyclone separator+Bag filter	8000	4000
BL-XW-8000(4000kg)	大型机 Large-scale machine	气流式 Airflow type	旋风分离器+水膜除尘器 Cyclone separator+water film dust collector	8000	4000
BL-D-8000(4000kg)	大型机 Large-scale machine	气流式 Airflow type	袋滤器 Bag filter	8000	4000

CLOSED LOOP SPRAY DRYER

闭式循环喷雾干燥机

采用闭式循环系统，干燥介质为惰性气体（一般为氮气），在密闭环境下工作。适用于有机溶剂物料、易氧化物料、易燃易爆物料及有毒物料的干燥处理。氮气经加热后进入干燥塔，液体物料经雾化器雾化后与热氮气接触瞬间干燥，粉体采用多点可选收料。含溶剂蒸汽的废气经旋风分离器及袋滤器除尘后进入冷凝器，将有机溶剂冷凝回收，不凝性氮气经加热后循环使用。系统内保持正压状态，配备双重氧含量在线监测装置，确保运行安全。回收率高，产品残余溶剂低。

It adopts a closed-loop system with inert gas (usually nitrogen) as the drying medium, operating in a fully enclosed environment. It is suitable for drying materials containing organic solvents, easily oxidizable substances, flammable and explosive materials, and toxic materials.Nitrogen is heated before entering the drying tower. Liquid materials are atomized by the atomizer and instantly dried upon contact with hot nitrogen. Powder can be collected at multiple optional points.Waste gas containing solvent vapor passes through a cyclone separator and bag filter for dust removal, then enters a condenser to recover the organic solvent. Non-condensable nitrogen is reheated and recycled.The system maintains a positive pressure and is equipped with dual on-line oxygen content monitoring devices to ensure operational safety. It features high recovery rate and low residual solvent in the final product.

技术指标 / Technical indicators

机型：小型机 / 中型机 / 大型机　Model: Small Model / Medium Model / Large Model

雾化方式：离心雾化 / 气流喷嘴　Atomization method: Centrifugal atomization / airflow nozzle

气体：氮气惰性气体循环　Gas: Nitrogen inert gas circulation

物料收集：可选本体 / 旋风 / 高精度袋滤器　Material collection: Optional body/cyclone/high-precision bag filter

热源：电加热 / 燃气加热　Heat source: Electric heating / Gas heating

产品特性 / Product Features

- 氮气闭路循环以惰性氮气为干燥介质，密闭循环使用，有效防止物料氧化，具备防爆性能
  Nitrogen closed-loop circulation uses inert nitrogen as the drying medium in a closed cycle, preventing oxidation and explosion
- 溶剂可回收利用，含溶剂废气经冷凝回收处理，实现溶剂循环使用，有效降低生产成本
  Solvents are recoverable. Waste gas containing solvents is condensed and recycled, realizing solvent reuse and reducing costs
- 正压运行保安全，系统内维持正压状态，配备氧含量在线监测功能，全方位保障运行安全
  Positive pressure operation ensures safety, maintaining a positive pressure state within the system, equipped with online monitoring of oxygen content, and providing comprehensive protection for operational safety
- 在惰性气体保护下，物料不易氧化，易氧化物料干燥不变质
  Under inert gas protection, the material is not easily oxidized, and the easily oxidized material remains dry and does not deteriorate
- 收率高、残留低，干粉回收率达 95% 以上，产品残余溶剂含量低
  High recovery and low residue, with dry powder recovery rate over 95% and low residual solvent in the product

技术与参数 / Technology & Parameters

应用行业
Application industries

医药中间体、中药提取物、有机化工、树脂、涂料粉体、热敏性材料、易氧化锂电材料、含溶剂精细化学品、香精香料、农药杀虫剂等有毒有害需密闭处理的物料等

Pharmaceutical intermediates, Chinese herbal extracts, organic chemicals, resins, paint powders, heat sensitive materials, lithium oxide electrical materials, solvent containing fine chemicals, essence, spices, pesticides and other toxic and harmful materials that need to be sealed



型号 Model	类型 Type	适用溶剂 Applicable solvents
SC-DJ-1200(10kg)	小型机 Small-scale machine	H2O、CH4O、C2H6O、C3H8O、C2H6O2 CH2CL2、C3H6O、C4H8O2、C4H100····
SC-XDJ-1200(10kg)	小型机 Small-scale machine	
SC-XDYJ-1200(10kg)	小型机 Small-scale machine	
MC-DZ-2500(100kg)	中型机 Medium-size machine	
MC-XDZ-2500(100kg)	中型机 Medium-size machine	
MC-XDYZ-2500(100kg)	中型机 Medium-size machine	
BC-DZ-6000(1500kg)	大型机 Large-scale machine	
BC-XDZ-6000(1500kg)	大型机 Large-scale machine	
BC-XDYZ-6000(1500kg)	大型机 Large-scale machine	

TRL1 SINGLE STAGE HORIZONTAL EMULSIFIER

TRL1 单级卧式乳化机

琅菱提供多系列高品质乳化机，TRL1系列单级卧式乳化机核心优势突出：可高效完成多相物料的分散、乳化与均质，实现粒径分布均匀、成品细腻纯净。设备处理量大，完美适配工业化连续生产；采用 PLC 自动化控制，操作便捷精准，支持全自动 / 半自动无缝切换。严格遵循 EHEDG 卫生级标准，集混合、均质、分散三大功能于一体，封闭系统有效防尘防结团，轻松应对高粘度、含固等复杂物料工况，兼顾高效产能与稳定品质。

LONGLY offers a wide range of high-quality Emulsifier. The TRL1 Series Single-stage Horizontal Emulsifier features excellent performance: it efficiently disperses, emulsifies, and homogenizes multi-phase materials, ensuring uniform particle size distribution and delicate, pure finished products. With large processing capacity, it is ideal for industrial continuous production. Equipped with PLC automatic control, it features convenient and precise operation, supporting seamless switching between full-automatic and semi-automatic modes. Compliant with EHEDG hygiene standards, it integrates mixing, homogenization, and dispersion functions. Its closed design prevents dust and agglomeration, efficiently handling high-viscosity and solid-containing materials while balancing high productivity and stable quality.

产品特性 / Product Features

- 按照EHEDG（欧洲卫生工程与设计组织）准则制造，模块化设计，无死角结构，支持 CIP 清洗 / SIP 灭菌，满足洁净生产要求
  Manufactured according to EHEDG (European Health Engineering and Design Group) guidelines, modular design, no dead corner structure, supports CIP cleaning/SIP sterilization, meets clean production requirements
- 工作处理量大、能耗低，适配工业化连续生产，大幅提升生产效率
  High throughput with low energy consumption, suitable for industrial continuous production, significantly improving efficiency
- 采用集装式机械密封，抗腐蚀密封件，保养维护简便，设备使用寿命长
  Cartridge mechanical seal with corrosion-resistant components for simple maintenance and long service life
- 集成混合、均质、分散三种工艺模式，适配多种生产需求
  Integrates mixing, homogenization and dispersion functions to meet diverse production needs
- 封闭系统可解决投料粉尘问题，湿润颗粒，有效防止物料结块
  Closed system eliminates dust during feeding and wets particles to prevent agglomeration
- 配备不同分散刀头，可选择剪切速率，充分分散物料，适配湿磨工艺与高粘度物料
  Equipped with different dispersing heads for adjustable shear rates, suitable for wet grinding processes and high-viscosity materials
- PLC 系统控制，支持全自动 / 半自动模式切换，操作反应迅速，节省人工成本
  PLC-controlled system supports full-automatic/semi-automatic mode switching, enabling fast response and labor savings

技术与参数 / Technology & Parameters

应用行业
Application industries

电池电子、磷酸铁锂、涂料、医药、农药等

Battery electronics, lithium iron phosphate, coatings, pharmaceuticals, pesticides, etc



型号 Model	电机功率 Motor power (kW)	转速 Speed (r/min)	流量 Flow (T/h)
TRL1-7.5	7.5	2900	3
TRL1-3	3	2900	6
TRL1-11	11	2900	10
TRL1-15	15	2900	15
TRL1-22	22	2900	20
TRL1-30	30	2900	30
TRL1-37	37	2900	35
TRL1-55	55	1450	50

TRL3 THREE STAGE HORIZONTAL EMULSIFIER

TRL3 三级卧式乳化机

琅菱 TRL3 系列三级卧式乳化机，三级均质工艺让物料粒径分布更集中，有效杜绝分层、沉淀，稳定产品品质；可高效处理高粘度、含固颗粒等复杂物料，适配电池电子、磷酸铁锂、涂料、医药等多领域应用。配备 PLC 自动化控制，支持全自动 / 半自动切换，操作便捷精准，提升生产效率与品质一致性。

The LONGLY TRL3 Series Triple-stage Horizontal Homogenizer features triple-stage homogenization, concentrating particle size distribution to prevent delamination and sedimentation, ensuring stable product quality. It efficiently handles complex materials such as high-viscosity, hard-to-disperse and solid-containing materials, widely applied in battery electronics, lithium iron phosphate, coatings, pharmaceuticals, and pesticides. Equipped with PLC automatic control for full-automatic/semi-automatic switching, it offers convenient, precise operation to enhance production efficiency and quality consistency.

产品特性 / Product Features

- 转子与定子精密配合，三级结构实现强剪切力，物料粒径分布更集中，有效防止分层、沉淀，提升产品均匀度与稳定性
  Precision-matched rotor and stator in a triple-stage design deliver strong shearing force, resulting in a narrower particle size distribution. It effectively prevents delamination and sedimentation, improving product uniformity and stability
- 转子高速旋转形成高频强力剪切，结合摩擦、离心挤压、液流碰撞等综合效应，实现物料的充分细化与混合
  High-speed rotor rotation generates high-frequency powerful shearing, combined with friction, centrifugal extrusion, and fluid impact, achieving thorough material refinement and mixing
- 可高效处理高粘度、难分散及含固体颗粒的物料
  Efficiently handles high-viscosity, hard-to-disperse, and solid-containing materials
- 优化的结构组合可匹配不同生产流程工艺，适配多种工况，让系统始终处于最佳运行状态
  Optimized structural combinations adapt to various production processes and working conditions, keeping the system operating at peak performance
- 配备 PLC 系统与触摸屏操作，支持全自动 / 半自动控制模式切换，操作简便，控制精准，降低人工误差
  Equipped with PLC system and touchscreen operation, supporting full-automatic/semi-automatic mode switching. Easy to operate with precise control, reducing manual errors
- 爪式结构实现双向吸料，提升进料效率，适配多样化的物料输送场景
  Claw-type structure enables bidirectional feeding, improving feeding efficiency and adapting to diverse material conveying scenarios

技术与参数 / Technology & Parameters

应用行业
Application industries

电池电子、磷酸铁锂、涂料、医药、农药等

Battery electronics, lithium iron phosphate, coatings, pharmaceuticals, pesticides, etc



型号 Model	电机功率 Motor power (kW)	转速 Speed (r/min)	流量 Flow (T/h)
TRL3-4	4	2900	1.5
TRL3-7.5	7.5	2900	4
TRL3-18.5	18.5	2900	10
TRL3-22	22	1450	20
TRL3-37	37	1450	30
TRL3-55	55	1450	40
TRL3-75	75	1450	50
TRL3-90	90	1450	60

TRH VERTICAL MIXING EMULSIFIER

TRH 立式混合乳化机

琅菱 TRH 系列立式混合乳化机，采用立式设计，可自动排空物料、调节固液供应，方便物料添加与排出，减少人工操作，提升生产效率；转子与定子精密配合，高速旋转时形成强大剪切力，通过液力剪切、摩擦、离心挤压等作用，快速实现不同相态物料的均匀分散与乳化，使物料颗粒细化、粒径分布均匀，保障产品稳定性与品质；同时配备 PLC 控制系统，支持全自动 / 半自动模式切换，操作简便、控制精准，有效降低人工误差与劳动强度。

LONGLY TRH series vertical mixing emulsifier adopts a vertical design, which can automatically empty materials, adjust solid-liquid supply, facilitate material addition and discharge, reduce manual operation, and improve production efficiency; The rotor and stator are precisely matched, forming a strong shear force during high-speed rotation. Through hydraulic shearing, friction, centrifugal extrusion and other effects, the uniform dispersion and emulsification of materials in different phases are quickly achieved, resulting in fine particle size and uniform particle size distribution, ensuring product stability and quality; Equipped with a PLC control system, it supports automatic/semi-automatic mode switching, featuring simple operation and precise control while effectively reducing human error and labor intensity.

产品特性 / Product Features

- 采用双水平液体接口 + 垂直固体接口，可实现粉体与液体的独立、定量供给，大幅提升配比精度
  Dual-interface design for precise solid-liquid feeding, with dedicated ports for accurate powder and liquid dosing
- 固液在预混合室按固定比例初步混合，再进入剪切腔，大幅减少体系中的滞留空气，提升成品稳定性
  Unique pre-mixing chamber eliminates trapped air by combining phases at fixed ratios before shearing, enhancing product stability
- 可配置三级分散头，提供更强剪切力，轻松应对湿磨工艺、高粘度物料等复杂工况，成品粒径更均匀
  Optional 3-stage dispersing head delivers stronger shearing force for wet grinding and high-viscosity processes, ensuring finer, uniform particle size
- 可处理固含量高达 80% 的物料，支持高浓度浆料制备，为高固含配方提供高效解决方案
  High solid content handling up to 80% enables efficient processing of high-concentration slurries for advanced formulations
- 粉体在封闭系统中被液体充分润湿，从源头解决投料粉尘问题，同时避免颗粒团聚，提升混合效率
  Closed wetting process eliminates dust and prevents agglomeration by fully wetting powder in a sealed system, boosting mixing efficiency
- 严格遵循 ATEX 防爆设计规范，可在易燃易爆工况下安全运行，为化工、农药等行业提供安全保障
  ATEX-compliant explosion-proof design ensures safe operation in hazardous environments, suitable for chemical and pesticide industries
- 所有接触物料部件采用 316L/316Ti 不锈钢，符合 3A 卫生标准，支持 CIP 清洗 / SIP 灭菌，适配医药、食品等高洁净场景
  All wetted parts are made of 316L/316Ti stainless steel, compliant with 3A sanitary standards, and support CIP cleaning / SIP sterilization, making them suitable for high-sanitation applications such as pharmaceutical and food industries

技术与参数 / Technology & Parameters

应用行业
Application industries

电池电子、磷酸铁锂、涂料、医药、农药等

Battery electronics, lithium iron phosphate, coatings, pharmaceuticals, pesticides, etc



型号 Model	电机功率 Motor power (kW)	生产能力 Production capacity (L/h)	转速 Speed (r/min)
TRH-05	11	560	0-7500
	控制方式 Control method	密封方式 Sealing method	粉体入料口 Powder feeding port
	触摸屏 PLC控制方式 Touch screen PLC control	双端面机械密封 Manifold double-acting mechanical seal	DN50
	液相入料口 Liquid phase feed inlet	浆料出料口 Slurry discharge outlet	外形尺寸 Overall dimensions (mm)
	DN25	DN32	1300×900×1800

LFS HIGH-SPEED DISPERSER

LFS 高速分散机

琅菱 LFS 系列高速分散机，通过中高速旋转的分散盘产生的高剪切力与强涡流效应，可快速将固体颗粒均匀稳定地分散于液体介质中，广泛应用于油漆、涂料、油墨、粘合剂和精细化学品的工业化批量生产，常见于预搅拌与预分散等环节；针对易分散或细度要求不高的物料，可直接作研磨分散用，省工序提效率。

The LONGLY LFS series high-speed disperser can quickly and uniformly disperse solid particles in liquid media through the high shear force and strong eddy current effect generated by the dispersing disk rotating at medium and high speeds. It is widely used in industrial batch production of paints, coatings, inks, adhesives, and fine chemicals, and is commonly used in pre mixing and pre dispersion processes; For materials that are easy to disperse or have low fineness requirements, they can be directly used for grinding and dispersion, saving processes and improving efficiency.

技术指标 / Technical indicators

电机功率：0.75-75kW　Motor Power: 0.75-75kW

搅拌转速：0-1500r/min　Mixing Speed: 0-1500r/min

搅拌容量：2L-3500L　Mixing Capacity: 2-3500L

分散盘直径：180-500mm　Disperser disc diameter：180-500mm

升降行程：800-1700mm　Lifting Stroke: 800-1700mm

产品特性 / Product Features

- 采用变频器无级调速，精准控制颗粒变化，运行时间长、噪音低、能耗低
  Adopting variable frequency drive for stepless speed regulation, precise control of particle changes, long running time, low noise, and low energy consumption
- 分散盘拆装方便，可根据生产工艺更换不同尺寸和形式（双层/单层）
  The dispersed disk is easy to disassemble and assemble, and can be replaced with different sizes and forms (double-layer/single-layer) according to the production process
- 液压油缸升降平稳顺畅，高度可调，防止罐内物料分层，保证混合效果
  The hydraulic cylinder rises and falls smoothly and steadily, with adjustable height to prevent material stratification in the tank and ensure mixing effect
- 罐体固定可选配多种的夹紧方式（皮带夹紧、手动旋转夹紧、气动夹紧），安全可靠
  The tank can be fixed with various clamping methods (belt clamping, manual rotation clamping, pneumatic clamping), which are safe and reliable
- 单轴和双轴可选，灵活适配多物料特性，提高分散效率
  Single axis and dual axis options are available, flexibly adapting to the characteristics of multiple materials and improving dispersion efficiency

技术与参数 / Technology & Parameters



双层式强力分散盘
Double layered strong dispersing disc



双轴强力分散盘
Dual axis strong dispersion disc



型号 Model	电机功率 Motor power (kW)	升降行程 lifting stroke (mm)	转速 Speed (r/min)	分散盘直径 Dispersion disk diameter (mm)	搅拌容量 Mixing capacity (L)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
LFS-5HP	4	800	1500	180	100-200	750	1630×500×1555
LFS-10HP	7.5	1000	1500	250	200-400	980	1700×500×1680
LFS-15HP	11	1000	1200	280	400-600	1120	1750×500×1700
LFS-20HP	15	1100	1100	300	600-1000	1410	2015×600×1765
LFS-25HP	18.5	1200	1000	330	800-1200	1720	2050×650×1800
LFS-30HP	22	1200	1000	350	1000-1500	1860	2050×700×2200
LFS-40HP	30	1400	1000	380	1200-2000	2580	2100×800×2300
LFS-50HP	37	1400	900	400	1400-2500	2740	2200×900×2500
LFS-75HP	55	1600	800	450	2500-3000	2000	2600×1200×2700
LFS-100HP	75	1700	750	500	3000-3500	2300	2750×1200×2700

应用行业 / Application industries

油漆、涂料、颜料、粘合剂、密封剂、染料、造纸等
Paint, coatings, pigments, adhesives, sealants, dyes, papermaking, etc

GF NANO HIGH-SPEED DISPERSER

GF 纳米高速分散机

琅菱GF系列纳米高速分散机，通过独特分散结构与专利冷却系统，实现纳米级均匀分散，适配三元材料、石墨烯等难分散物料，满足动力电池等高固含、高粘度浆料的连续生产需求。设备采用伺服驱动，运行稳定可靠，使用寿命长。

LONGLY GF Series Nano High-speed Dispersers achieve nano-level uniform dispersion through a unique dispersing structure and patented cooling system, suitable for hard-to-disperse materials such as ternary materials and graphene. They meet the continuous production requirements of high-solid-content, high-viscosity slurries in power battery applications. Equipped with servo drive, the equipment operates stably and reliably with a long service life.

技术指标 / Technical indicators

电机功率：7.5-150kW　Motor Power: 7.5-150kW

生产能力：15-1500L/h　Production capacity: 15-1500L/h

控制方式：触摸屏　Control mode: touch screen

搅拌转速：0-12000r/min　Mixing Speed: 0-12000r/min

料 泵：隔膜泵　Material pump: diaphragm pump

产品特性 / Product Features

- 独特分散结构通过层流、湍流与空穴效应协同作用，快速打破团聚体，实现纳米级均匀分散，且不破坏浆料内部结构
  The unique structure breaks agglomerates via laminar, turbulent and cavitation effects, achieving nano-level uniform dispersion without damaging the slurry's internal structure

- 采用永磁水冷电机，运行稳定可靠，大幅延长设备使用寿命，降低维护成本
  Adopting a permanent magnet water-cooled motor, the operation is stable and reliable, greatly extending the service life of the equipment and reducing maintenance costs

- 分散轮与桶体结构经过特殊优化，特别适合三元材料、石墨烯、氧化石墨烯等分散难度高的产品
  Specially designed dispersing wheel and barrel structure deliver excellent performance for difficult materials like ternary materials, graphene, and graphene oxide

- 冷却系统自有专利5-7℃冷冻水对浆料进行预冷却、分散冷却，使浆料在高速分散时能够得到充分的冷却，充分满足用户的特定工艺要求
  Patented independent cooling system adopts 5-7℃ chilled water to perform pre-cooling and dispersion cooling on the slurry, which enables sufficient heat dissipation during high-speed dispersion and fully meets customers' specific process requirements.

技术与参数 / Technology & Parameters

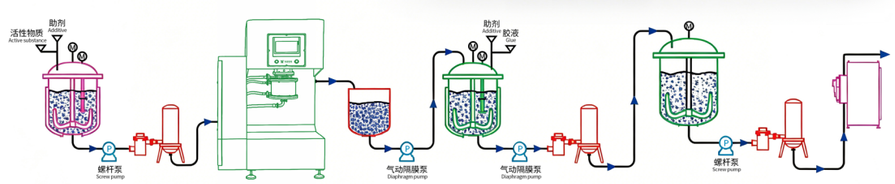
应用行业
Application industries

锂电池材料、隔膜、电子陶瓷、纳米材料、5G材料等

Lithium battery materials, separators, electronic ceramics, nanomaterials, 5G materials, etc



适用于动力电池浆料连续生产的工艺流程
Process flow chart for continuous production of power battery slurry



型号 Model	电机功率 Motor power (kW)	生产能力 Production capacity (L/h)	转速 Speed (r/min)	控制方式 Control method	料泵 Feed pump	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
GF-15	7.5	15	0-12000	触摸屏 Touch screen	隔膜泵 Diaphragm pump	200	650×550×750
GF-60	25	60	0-10000	触摸屏 Touch screen	隔膜泵 Diaphragm pump	850	900×1100×1900
GF-240	55	240	0-6000	触摸屏 Touch screen	隔膜泵 Diaphragm pump	1200	1100×1050×1800
GF-600	75	600	0-4500	触摸屏 Touch screen	隔膜泵 Diaphragm pump	1300	1100×1050×1800
GF-900	120	900	0-4000	触摸屏 Touch screen	隔膜泵 Diaphragm pump	1300	1300×1400×2400
GF-1200	140	1200	0-3000	触摸屏 Touch screen	隔膜泵 Diaphragm pump	1550	1400×1500×2600
GF-1500	150	1500	0-2600	触摸屏 Touch screen	隔膜泵 Diaphragm pump	1800	1500×1600×2800

ONLINE
VACUUM DEFOAMER

在线式真空脱泡机

琅菱在线式真空脱泡机可实现物料在线连续脱气，脱泡时间短、效率高，脱泡过程无需添加任何助剂，不会改变物料的原有成分与性能，降低材料成本；模块化设计易清洗维护，支持多粘度浆料处理，可接入 MES 系统，适配智能工厂生产需求。

The LONGLY online vacuum defoamer can achieve continuous degassing of materials online, with short defoaming time and high efficiency. The defoaming process does not require the addition of any additives, and will not change the original composition and properties of the material, reducing material costs; Modular design is easy to clean and maintain, supports multi viscosity slurry processing, can be connected to MES system, and adapts to the production needs of intelligent factories.

借助 VTR 高速旋膜真空原理，浆料在真空负压下进入腔体并导入旋转盘中心，经高速旋转成膜后，在离心力作用下向外流动；通过壁面摩擦与比重差析出微气泡，再由真空负压破泡，脱气后的浆料在离心重力驱动下自动排出，实现连续在线脱泡。

Based on the VTR high-speed rotating-film vacuum principle, the slurry enters the chamber under vacuum negative pressure and is introduced to the center of the rotating disk. After forming a film through high-speed rotation, it flows outward under centrifugal force. Microbubbles are separated by wall friction and density difference, then broken under vacuum negative pressure. The degassed slurry is automatically discharged under centrifugal gravity, realizing continuous on-line defoaming.

产品特性 / Product Features

- 采用旋转 - 薄膜 - 真空原理，可实现物料不间断连续脱气，脱泡时间短、效率高，适配工业化流水线生产
  Based on the rotary-film-vacuum principle, it enables uninterrupted continuous degassing with short cycle time and high efficiency, ideal for industrial production lines

- 接液部件采用全不锈钢材质，搭配PTFE 材质，不污染原材料，保障物料纯度
  The liquid receiving components are made of all stainless steel material, combined with PTFE material, which does not pollute the raw materials and ensures the purity of the materials

- 可处理不同粘度范围的浆料，通过调整电机转速即可改变处理量，整个过程可实现全自动、半自动、手动三种模式切换，满足不同生产阶段的操作需求，降低人工误差
  It can handle slurries with different viscosity ranges, and the processing capacity can be changed by adjusting the motor speed. The entire process can switch between fully automatic, semi-automatic, and manual modes to meet the operational needs of different production stages and reduce manual errors

- 采用模块化结构设计，操作简单，清洗便捷，降低维护成本，减少停机时间
  Adopting a modular structure design, it is easy to operate, easy to clean, reduces maintenance costs, and minimizes downtime

技术与参数 / Technology & Parameters

应用行业
Application industries

化学工业、电池浆料、
新能源、油墨涂料、
食品、医药、化妆品等

Chemical industry, battery slurry, new energy, ink and coating, food, medicine, cosmetics, etc



型号 Model	转速 Speed (rpm)	电机功率 Motor power (kW)	处理量 Processing capacity (L/h)	粘度 Viscosity (mPa·s)	真空度 Vacuum level (Mpa)	外形尺寸 Overall dimensions (mm)
LTP-50	1400-1500	5.5	50-500	1500-15000	- (0.09-0.098)	1450×1250×1710
LTP-100	1400-1500	11	50-1100	1500-15000	- (0.09-0.098)	1450×1250×1710
LTP-200	1400-1500	18.5	50-1500	1500-15000	- (0.09-0.098)	1350×1150×1850

HIGH PRESSURE HOMOGENIZER

高压均质机

琅菱高压均质机依托稳定且高压（上限压力 < 200MPa）输出，利用空穴、撞击与剪切三重效应，实现物料的纳米级精准细化、高效均质混合及片层剥离。核心部件采用金刚石等超硬材料自主精加工，设备使用寿命长，运行稳定，并可进行定制化配置，为新能源、制药、精细化工及食品领域提供从实验室小试到工业量产的全场景需求。

The LONGLY high-pressure homogenizer relies on stable and high-pressure (upper limit pressure<200MPa) output, utilizing the triple effects of cavitation, impact, and shear to achieve nanoscale precision refinement, efficient homogeneous mixing, and layer peeling of materials. The core components are independently precision processed using superhard materials such as diamond. The equipment has a long service life, stable operation, and can be customized, providing full scenario requirements from laboratory trials to industrial mass production for the fields of new energy, pharmaceuticals, fine chemicals, and food.

产品特性 / Product Features

- 均质部件采用金刚石或其他超硬材料，自主加工，使用寿命长， 设备使用稳定可靠
  Homogeneous components are made of diamond or other superhard materials, processed independently, with a long service life and stable and reliable equipment use

- 高压部件分体式独特设计，设备灵活科移动，日常易维护保养，满足多场景工况
  Unique split design of high-voltage components, flexible and mobile equipment, easy to maintain and upkeep in daily life, meeting multiple working conditions

- 阻尘隔菌与防泄漏双重保护，可选配全封闭外壳，隔绝外界污染源，杜绝物料外泄污染环境
  Double protection against dust, bacteria, and leakage, with optional fully enclosed casing to isolate external sources of pollution and prevent material leakage from polluting the environment

- 集成液压加压与PLC智能触控，支持手动/自动双模切换，配备多重安全防护，操作零风险
  Integrated hydraulic pressurization and PLC intelligent touch control, supporting manual/automatic dual-mode switching, equipped with multiple safety protections, zero risk operation

- 符合FDA、GMP 医药级认证等严格规范，CE 欧盟认证，ATEX 防爆认证，安全卫生
  Compliant with strict regulations such as FDA, GMP pharmaceutical grade certification, CE EU certification, ATEX explosion-proof certification, safety and hygiene

- 根据物料特性精准定制工艺与硬件，可增加湿度和水冷装置，实现最佳均质效能
  Accurately customize processes and hardware based on material characteristics, which can increase humidity and water cooling devices to achieve optimal homogenization efficiency

技术与参数 / Technology & Parameters

应用行业
Application industries

饮品均质、维生素、纤维素、脂质体、乳剂、乳品、细胞破碎、细菌、乳液、面霜、颜料、石墨烯、二氧化硅、碳纳米管、碳黑等生物、医药、食品、精细化工领域

Beverage homogenization, vitamins, cellulose, liposomes, emulsions, dairy products, cell breakage, bacteria, lotion, face cream, pigments, graphene, silica, carbon nanotubes, carbon black and other biological, pharmaceutical, food, fine chemical fields



型号 Model	电机功率 Motor power (kW)	最大设计压力 Maximum design pressure (Mpa)	最大工作压力 Maximum working pressure (Mpa)	处理量 Processing capacity (L/h)	重量 Weight (kg)	外形尺寸 Overall dimensions (mm)
ES-150ICD-30K	1.1	200	180	10	35	690×374×521
ES-500HPV-30K	5.5	200	180	30	300	980×780×1818
ED-3300HPV-30K	30	200	180	200	800	1200×1500×1400
ET-500HPV-150M	30	150	140	500	1600	1363×1693×1618
ET-2000HPV-150M	75	120	100	2000	2200	2560×1640×1720

VERTICAL AIRFLOW STIRRING MILL

立式气流搅拌磨

立式气流搅拌磨是业界领先的超细材料加工设备，配备集成式动态分级机，优势在于对硬质材料实现超细、低污染研磨。固体材料（如陶瓷、锂电材料）的粉碎过程能耗随目标粒径细化而显著上升，而立式气流搅拌磨可在降低能耗的同时，生产出更细的颗粒，满足工艺要求的同时大幅降低能源成本。

The vertical jet stirred mill is an industry-leading equipment for processing ultrafine materials, equipped with an integrated dynamic classifier. Its key advantage lies in the ultrafine, low-contamination grinding of hard materials. While the comminution process of solid materials (such as ceramics or lithium battery materials) typically consumes more energy as the target particle size becomes finer, the vertical jet stirred mill is capable of producing increasingly finer particles while reducing energy consumption, meeting process requirements and significantly lowering energy costs.

细度可达d97<2μm Output fineness d97<2μm

节能高达80% Energy saving up to 80%

干法中的超细研磨 Ultra fine grinding in dry process

均匀的晶粒分布 Uniform grain distribution

严格的上限粒径限制 Strict upper limit particle size limitation

产品特性 / Product Features

- 设备采用紧凑型结构设计，大幅节省安装空间，适配多种生产场景
  The equipment adopts a compact structure design, greatly saving installation space and adapting to various production scenarios
- 从实验室到生产规模，全范围可实现放大生产，在整个规格范围内（从实验室到工业化生产），都具备可行性
  From laboratory to production scale, it is feasible to scale up production across the entire specification range (from laboratory to industrial production)
- 研磨效率高，单位能耗降低80%。与气流磨相比，能实现更细的颗粒尺寸，生产效益大幅提升
  High grinding efficiency, reducing unit energy consumption by 80%. Compared to air flow mills, it can achieve finer particle sizes and significantly improve production efficiency
- 通过调整分级机转速即可精准控制成品细度，轻松适配不同工艺的粒度要求
  The finished product fineness can be accurately controlled by adjusting the classifier speed, easily adapting to the particle size requirements of different processes
- 便捷组装、拆卸和清洁，大幅缩短换料时间，是频繁更换物料时的理想机型
  Convenient assembly, disassembly, and cleaning significantly reduce material change time, making it an ideal model for frequent material changes
- 研磨部件和分级部件可选陶瓷材质
  Grinding parts and grading parts can be made of ceramic materials

技术与参数 / Technology & Parameters



型号 Model	电机功率 Motor power (kW)	分级轮功率 Graded wheel power (kW)	气流量 Airflow rate (m^3/h)	产能 Production (kg/H)(AL2O3)
LG150	0.75	1	42	3
LG250	2.2	2	55-100	10
LG450	11	5.5	400-600	28
LG600	22	7.5	600-1000	60
LG800	37.5	17.5	1100-1800	130
LG1000	82	35	2000-2500	200

应用行业 / Application industries

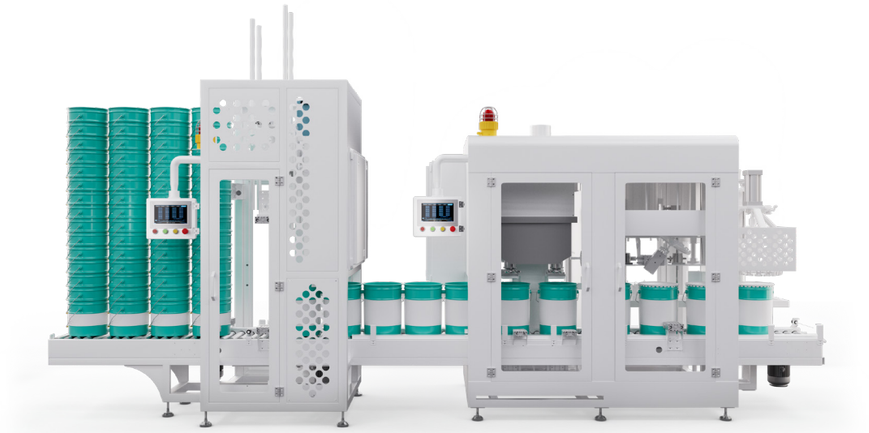
硬脆、对温度不敏感材料进行超细研磨的理想选择; 在研磨过程中也可使用添加剂
适用于无机颜料、陶瓷材料、金属氧化物、电池材料、工业矿物、玻璃、玻璃熔块、合金、磁性材料、石墨等行业

Ideal choice for ultrafine grinding of hard, brittle, and temperature insensitive materials; Additives can also be used during the grinding process.

Suitable for industries such as inorganic pigments, ceramic materials, metal oxides, battery materials, industrial minerals, glass, glass melt, alloys, magnetic materials, graphite, etc

WEIGHING AUTOMATIC FILLING MACHINE

称重式自动灌装机



琅菱称重式自动灌装机，以高精度称重技术为核心，实现液体物料的精准定量灌装。传感器实时监测重量变化，到达预设值自动停灌，计量误差低至 ±0.01~0.03kg；支持净重 / 毛重双模式，灌装高效稳定，是液体物料自动化灌装的理想设备。

LONGLY Weighing Automatic Filling Machine is built around high-precision weighing technology to achieve accurate quantitative filling of liquid materials. Sensors monitor weight changes in real time and stop filling automatically at the preset value, with a metering error as low as ±0.01~0.03kg. Supporting both net and gross weight modes, it delivers efficient and stable filling, making it ideal for automated liquid filling applications.

● 产品特性 / Product Features

- 内置动态误差修正功能，实现高精度称重，确保计量准确可靠
  Built in dynamic error correction function, achieving high-precision weighing and ensuring accurate and reliable measurement
- 灌装头高度与压盖高度可调，灌装头可快速拆装，易清洗，满足多工况生产
  The height of the filling head and the capping height are adjustable, and the filling head can be quickly disassembled and cleaned, meeting the production needs of multiple working conditions
- 配带电机驱动，动力滚筒输送，能耗运行低，易于维护
  Equipped with motor drive and powered drum conveyor, it operates with low energy consumption and is easy to maintain
- 人性化操作界面，灌装重量可在量程内任意设定，操作直观便捷
  Humanized operation interface, filling weight can be set arbitrarily within the range, intuitive and convenient operation
- 防爆+VOC抽气罩，安全可靠、废气集中处理，改善车间环境
  Explosion proof+VOC exhaust hood, safe and reliable, centralized treatment of exhaust gas, improving workshop environment
- 具备故障自诊断功能，设有紧急停止与断电保护双重机制，保障生产安全
  Equipped with fault self diagnosis function and dual mechanisms of emergency stop and power-off protection to ensure production safety

● 技术与参数 / Technology & Parameters

称重范围 Weighing range (kg)	分度值 Graduation value (g)	罐桶规格 Tank specifications (mm)	灌装速度 Filling speed (Bucket/h)	气源 Gas source (Mpa)	功率 Power (kW)	电源 Power supply	准确度等级 Accuracy class	外形尺寸 Overall dimensions (mm)
≤300	1,2,5,10	≤直径600×高度900 ≤Diameter600×Height900	40	>0.5	3	AC380±10% 50HZ	*(0.5)级 *(0.5)level	3000×1000×2400

AUTOMATIC PALLETIZING MACHINE

自动码垛机



琅菱自动码垛机，以机械臂为核心实现桶装物料的全自动码垛作业。设备按预设程序完成编组、推桶、堆叠全流程，码放整齐稳定，全程无需人工操作；支持与称重式自动灌装机无缝对接，实现灌装 - 码垛一体化流水线作业，大幅提升生产效率。

LONGLY Automatic Palletizing Machine realizes fully automatic palletizing of pail materials with a robotic arm as the core. It completes the whole process of grouping, pail pushing and stacking according to preset programs, with neat and stable placement and no manual operation required. It supports seamless connection with the weighing automatic filling machine to realize integrated filling and palletizing line operation, greatly improving production efficiency.

● 产品特性 / Product Features

- 机械臂采用高度非线性、强耦合复杂系统，可多输入多输出，高精度
  The robotic arm adopts a highly nonlinear and strongly coupled complex system, which can have multiple inputs and outputs with high precision
- 支持全流程数字化追踪，实时数据记录，精准监控进度
  Support full process digital tracking, real-time data recording, and precise monitoring of progress
- 灵活性高，低能耗，操作空间大，码垛响应准确快速
  High flexibility, low energy consumption, large operating space, accurate and fast palletizing response
- 连续24/7高速运行，缩短码垛周期，降低长期劳动力成本
  Continuous 24/7 high-speed operation reduces palletizing cycles and lowers long-term labor costs
- 最大限度地减少因手动操作错误造成的产品损坏，确保生产连续性和质量
  Minimize product damage caused by manual operation errors and ensure production continuity and quality

抓取重量范围 Capture weight range (kg)	分度值 Graduation value (g)	罐桶规格 Tank specifications (mm)	灌装速度 Filling speed (Bucket/h)	气源 Gas source (Mpa)	功率 Power (kW)	电源 Power supply	准确度等级 Accuracy class	外形尺寸 Overall dimensions (mm)
≤150	1,2,5,10	≤直径300×高度300-400 ≤Diameter300×Height300-400	8-12	>0.5	7	AC380±10% 50HZ	*(0.5)级 *(0.5)level	10000×2700×2200

● 应用行业 / Application industries

涂料、油漆、油墨、润滑油、树脂、化工溶剂、粘合剂、新能源等领域的液态物料
Liquid materials in the fields of coatings, paints, inks, lubricants, resins, chemical solvents, adhesives, new energy, etc

SMART FACTORY

智慧工厂



琅菱智能可根据工厂实际运转方式灵活配置，工厂中的每个角色都可以快速地获取协作所需的数据信息，帮助您更好的改善实际生产效率和质量，通过对生产需求、生产资源和生产目标全面掌握，充分激发信息透明优势，让您更有信心的去面对各种生产难题!实现数据驱动制造，完成智能工厂升级。

LONGLY Intelligence can be flexibly configured according to the actual operation mode of the factory, and each role in the factory can quickly obtain the data information needed for collaboration, helping you better improve Actual production efficiency and quality, through comprehensive understanding of production demand, production resources, and production goals, fully stimulate the advantage of information transparency, and give you more confidence to face various challenges Difficulties in production! Realize data-driven manufacturing and complete the upgrade of smart factories.

01

生产可视化和报表分析

Production visualization and report analysis

实现数据采集及处理，设备状态监控，生产过程监控，报警控制，生产数据统计分析。

Realize data collection and processing, equipment status monitoring, production process monitoring, alarm control, and statistical analysis of production data.

02

生产管理

Production Management

完成生产计划，生产执行，工作分配，论功行赏，绩效管理。

Complete the production planning, production execution, work allocation, reward based on merit, performance management.

03

质量管理

Quality Control

数据实施采集，质量数据统计分析，质量控制及SPC质量防错。

Data collection, statistical analysis of quality data, quality control and SPC quality error prevention.

04

物料管理

Material Management

记录材料性能，有效控制材料在配方的选择，避免随意更换材料，提升产品稳定性。

Record material properties, effectively control the selection of materials in the formula, avoid random material.

05

物流管理

Logistics Management

包装装箱，库存控制，盘点管理，出入库管理，车辆状态监控。

Packing, inventory control, inventory management, inventory management, vehicle status monitoring.

06

设备管理

Equipment Management

合理的计划排程，减少设备停机时间，通过零配件的科学分类和库存监控，减少库存积压和报废。

Reasonable planning and scheduling, reduce equipment downtime, through the scientific classification of spare parts and inventory monitoring, reduce inventory overhang and scrap.

AUTOMATED HIGH BAY WAREHOUSE

自动化立体仓库



琅菱自动化立体仓库，是仓储领域的革新应用，实现自动存储和物品检索，优化仓库空间并提高存储量。系统由货架、堆垛起重机/穿梭车/机器人等自动化设备、出入库工作台及自动输送设备构成，依托计算机与条码管理系统，实现精准高效、可追溯的仓储作业和智能化管理。

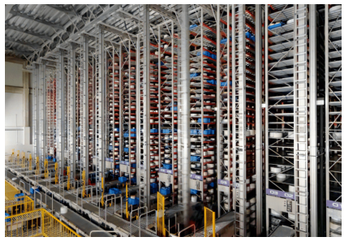
LONGLY automated three-dimensional warehouse is an innovative application in the field of warehousing, which realizes automatic storage and item retrieval, optimizes warehouse space, and increases storage capacity. The system consists of automated equipment such as shelves, stacker cranes/shuttles/robots, inbound and outbound workbenches, and automatic conveying equipment. It relies on computer and barcode management systems to achieve precise, efficient, and traceable warehousing operations and intelligent management.

产品特性 / Product Features

- 高层货架结合高密度设计，节省存储占地面积，提升空间利用率
  High rise shelves combined with high-density design save storage space and improve space utilization
- 计算机系统精准管理货物信息，减少人为差错，提高作业效率
  Computer systems accurately manage cargo information, reduce human errors, and improve operational efficiency
- 自动化搬运保障作业安全，降低货损率，满足特殊货物存储需求
  Automated handling ensures safe operations, reduces cargo damage rates, and meets the storage needs of special goods
- 高效存取有效衔接仓外生产环节，构建有序智慧物流系统和生产链
  Efficient access and effective connection of production processes outside the warehouse, building an orderly and intelligent logistics system and production chain

智能仓储核心模块 / Intelligent Warehousing Core Modules







输送机系统
Conveyor system

储存信息管理系统
Storage InformationManagement System

自动控制系统
Automatic control system

货 架
Shelf

托 盘
Pallet

AGV系统
AGV system

巷道堆垛机
Aisle stacking crane

应用行业 / Application industries

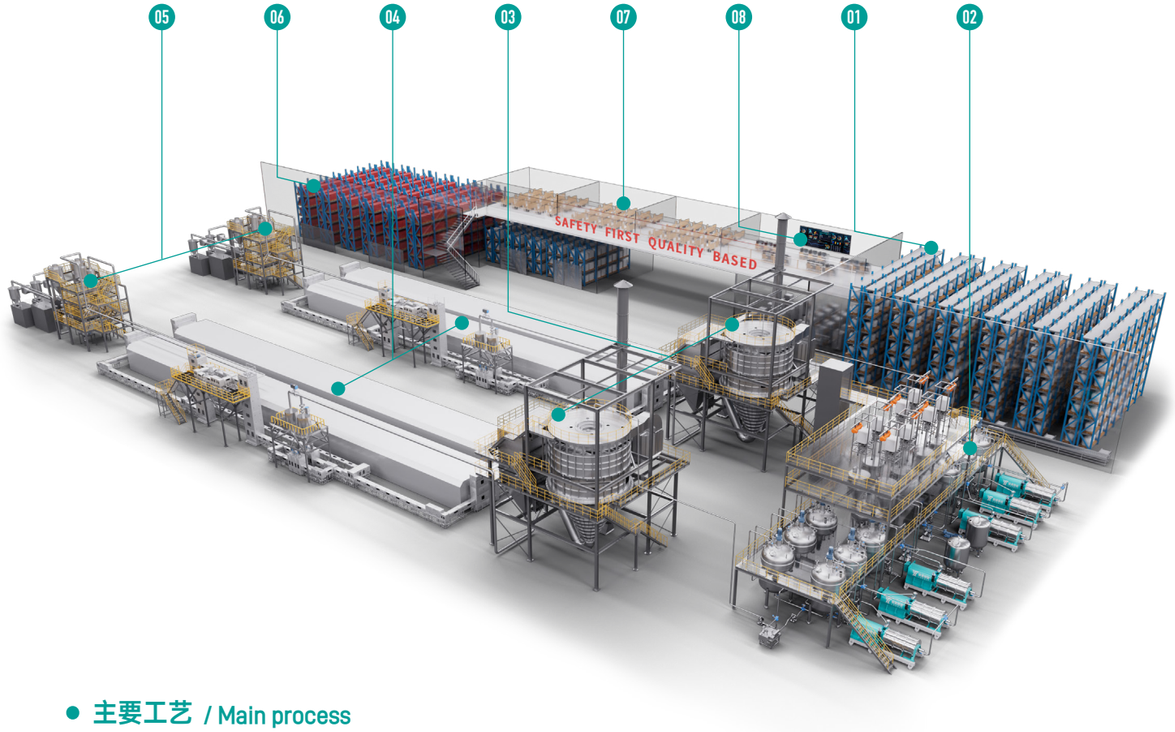
电力、冷链、新能源、食品、第三方物流、精密制造、医药、家居等各行业、多场景
Various industries and scenarios including electricity, cold chain, new energy, food, third-party logistics, precision manufacturing, pharmaceuticals, home furnishings, etc

BATTERY CATHODE MATERIALS PRODUCTION LINE

电池正极材料产线

我们为各类电池正极材料打造了高度自动化的全流程产线，集成了从投料、研磨、干燥、烧结、粉碎、包装、输送及控制系统的各个环节，实现正极材料的纳米级细化和均匀分散，在提升物料综合性能的同时，将整体生产效率提高30%-50%，从而显著增强电池的能量密度与循环寿命。

We have created highly automated full process production lines for various types of battery positive electrode materials, integrating various links from feeding, grinding, drying, sintering, crushing, packaging, conveying, and control systems to achieve nanoscale refinement and uniform dispersion of positive electrode materials. While improving the overall material performance, we have also increased the overall production efficiency by 30% -50%, significantly enhancing the energy density and cycle life of batteries.



主要工艺 / Main process

投料计量 Feeding measurement → 混合分散 Mixed dispersion → 粗砂磨 Coarse grinding → 超细研磨 Ultra fine grinding → 除铁过滤 Iron removal filtration → 喷雾干燥 Spray drying → 窑炉烧结 Kiln sintering → 包装 Packaging → 粉碎混批 Crush and mix batches

产品特性 / Product Features

- 接触部位采用陶瓷等非金属材质，配备多级除磁除铁过滤，减少金属杂质污染
  The contact area is made of non-metallic materials such as ceramics, equipped with multi-stage demagnetization and iron removal filters to reduce metal impurity pollution
- 产线配备完善的除尘、降噪、排污及溶剂回收系统，清洁生产，保障人员健康与作业环境
  The production line is equipped with complete dust removal, noise reduction, sewage and solvent recovery systems, ensuring clean production and guaranteeing personnel health and working environment
- 成功交付超510多个EPC项目及交钥匙工程，全流程经验确保产线具备高可靠、先进、经济、可延伸的优势
  Successfully delivered over 510 EPC projects and turnkey projects, with full process experience ensuring that the production line has high reliability, advanced technology, economy, and scalability advantages
- 符合工业4.0标准，MES系统中控管理，全流程数据监控可追溯，支持无人化操作与智能预警等，防错强
  Compliant with Industry 4.0 standards, MES system central control management, full process data monitoring and traceability, supporting unmanned operation and intelligent warning, etc., with strong error prevention
- 依托广东、湖北两大基地及超800人+团队，核心部件80%自主加工，确保高质量交付与稳定供应
  Relying on the two major bases in Guangdong and Hubei and a team of over 800 people, 80% of the core components are independently processed to ensure high-quality delivery and stable supply
- 产品通过CE、UL、ATEX、KCs、FDA等多项国际权威认证，满足全球市场准入要求，设备安全可靠运行
  The product has passed multiple international authoritative certifications such as CE, UL, ATEX, KCs, FDA, etc., meeting global market access requirements and ensuring safe and reliable operation of the equipment
- 产品每2年进行一次系统性迭代，研磨效率较传统产线可提升30%-50%，持续保持技术领先优势
  The product undergoes a systematic iteration every 2 years, and the grinding efficiency can be improved by 30% -50% compared to traditional production lines, maintaining a leading technological advantage

01 物料库 Material library
02 配料砂磨系统 Ingredient sand grinding system
03 喷雾干燥系统 Spray drying system
04 窑炉烧结系统 Kiln sintering system
05 粉碎包装系统 Crushing packaging system
06 成品库 Finished product warehouse
07 办公区域 Office area
08 监控中心 Monitoring Center





应用行业 / Application industries

锂电： 铁锂类材料：磷酸铁锂（LFP）、磷酸锰铁锂；三元类材料：镍钴锰酸锂（NCM）、镍钴铝酸锂（NCA）
钠电： 层状金属氧化物；聚阴离子化合物；普鲁士蓝类似物

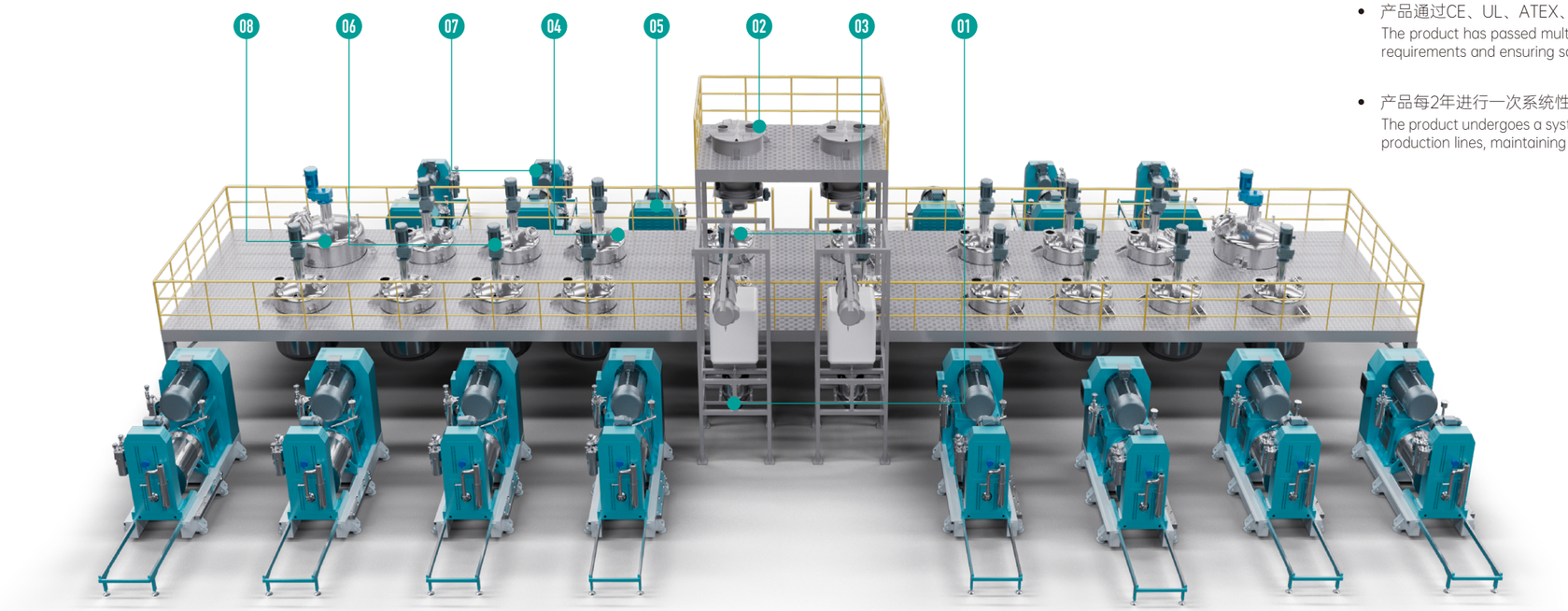
Lithium batteries: Iron lithium materials: Lithium iron phosphate (LFP), Lithium manganese iron phosphate; Ternary materials: Nickel Cobalt Manganese (NCM), Nickel Cobalt Aluminum (NCA)
Sodium batteries: layered metal oxide; Polyanionic compounds; Prussian blue analogue

BATTERY ANODE MATERIALS PRODUCTION LINE

电池负极材料产线

琅菱以纳米砂磨技术为核心，通过高剪切力有效解决碳基与硅基材料易团聚、混合不均等问题，实现100纳米以下的窄粒径分布，再经闭式干燥造粒、多级除磁过筛、包覆烧结等工序，最终制备出具有均匀核壳结构的高性能负极材料。

LONGLY uses nano sand grinding technology as its core, effectively solving the problems of easy agglomeration and uneven mixing of carbon based and silicon-based materials through high shear force, achieving narrow particle size distribution below 100 nanometers. After closed drying granulation, multi-stage demagnetization screening, coating sintering and other processes, high-performance negative electrode materials with uniform core-shell structure are finally prepared.



产品特性 / Product Features

- 闭式喷雾干燥，惰性气体保护防氧化、防爆，同时实现溶剂回收，物料回收率≥95%，安全，环保，高效
  Closed spray drying, inert gas protection against oxidation and explosion, and solvent recovery, material recovery rate ⩾ 95%, safe, environmentally friendly, efficient
- 立式、卧式及定制机型多系列可选，稳定实现D50<100nm超细研磨，优化材料比表面积
  Multiple series of vertical, horizontal, and customized models are available to achieve stable D50<100nm ultrafine grinding and optimize material specific surface area
- 冷却系统精准控温，防止硅碳材料团聚与热降解，稳定材料结构，提升一致性
  Accurate temperature control of the cooling system prevents the aggregation and thermal degradation of silicon carbon materials, stabilizes the material structure, and improves consistency
- 符合工业4.0标准，MES系统中控管理，全流程数据监控可追溯，支持无人化操作与智能预警等，防错强
  Compliant with Industry 4.0 standards, MES system central control management, full process data monitoring and traceability, supporting unmanned operation and intelligent warning, etc., with strong error prevention
- 依托广东、湖北两大基地及超800人团队，核心部件80%自主加工，确保高质量交付与稳定供应
  Relying on the two major bases in Guangdong and Hubei and a team of over 800 people, 80% of the core components are independently processed to ensure high-quality delivery and stable supply
- 产品通过CE、UL、ATEX、KCs、FDA等多项国际权威认证，满足全球市场准入要求，设备安全可靠运行
  The product has passed multiple international authoritative certifications such as CE, UL, ATEX, KCs, FDA, etc., meeting global market access requirements and ensuring safe and reliable operation of the equipment
- 产品每2年进行一次系统性迭代，研磨效率较传统产线可提升30%-50%，持续保持技术领先优势
  The product undergoes a systematic iteration every 2 years, and the grinding efficiency can be improved by 30% -50% compared to traditional production lines, maintaining a leading technological advantage

01 拆包站 Unpacking station
02 计量仓 Measuring bin
03 混料罐 Mixing tank
04 粗磨罐 Rough grinding tank
05 粗磨砂磨机 Coarse bead mill
06 细磨罐 Fine grinding tank
07 细磨砂磨机 Fine sanding mill
08 成品罐 Finished tank

主要工艺 / Main process

配料混合 (硅粉+碳源+溶剂) Mixing of ingredients (siliconpowder+carbon source+solvent) → 湿法砂磨 (D50<100nm) Wet grinding (D50<100nm) → 喷雾干燥 Spray drying → 碳包覆/热处理 Carbon coating/heat treatment → 解聚打散 Depolymerization and dispersion → 筛分除磁 Screening and demagnetization → 成品包装 finished product packaging

应用行业 / Application industries

石墨类： 天然石墨、人造石墨
硅碳类： 硅碳复合负极、硅氧碳复合负极
新型负极： 硬碳(无定形碳)、软碳(石墨化碳)、钛基负极

Graphite: natural graphite, artificial graphite
Silicon carbon: Silicon carbon composite negative electrode, silicon oxygen carbon composite negative electrode
New type of anode: hard carbon (amorphous carbon), soft carbon (graphitized carbon), titanium based negative electrode

SULFIDE SOLID ELECTROLYTES PRODUCTION LINE

硫化物固体电解质生产线

采用高密闭、防爆防腐的全惰性气体保护设计，集成非金属化处理设备，包括机械磨、真空干燥箱、混合器、井式炉、砂磨机、气流粉碎机与手套箱等，控制水氧含量稳定≤0.1ppm，实现纳米研磨(D50<1μm)，系统解决氧化、金属污染与泄漏等痛点，确保材料具备高离子电导率与空气稳定性，可满足高一致性的规模化生产需求。

Adopting a highly sealed, explosion-proof, and corrosion-resistant fully inert gas protection design, integrating non-metallic processing equipment including mechanical grinding, vacuum drying oven, mixer, well furnace, sand mill, airflow crusher, and glove box, etc., the water and oxygen content is controlled to be stable ≤ 0.1ppm, achieving nano grinding (D50<1 μ m). The system solves pain points such as oxidation, metal pollution, and leakage, ensuring that the material has high ionic conductivity and air stability, and can meet the needs of high consistency and large-scale production.



主要工艺 / Main process

原材料预处理
Raw material pretreatment
→ 前驱体混合
Precursor mixture
→ 电解质烧结
Electrolyte sintering
↓ 电解质细化
Electrolyte refinement
← 浆料干燥
Drying of pulp
← 干法解聚
Dry depolymerization
← 除磁筛分
Demagnetization screening

产品特性 / Product Features

- 全流程集成惰性气体保护，水氧含量稳定可控≤0.1ppm，隔绝空气与水汽
  Integrated inert gas protection throughout the entire process, stable and controllable water and oxygen content ≤ 0.1ppm, isolating air and water vapor
- 核心设备经非金属化处理，防腐、耐酸耐碱、不沾壁，避免金属污染，使用寿命长
  The core equipment has undergone non-metallic treatment, which is corrosion-resistant, acid and alkali resistant, and does not stick to walls, avoiding metal pollution and having a long service life
- 通过ATEX防爆认证，高密闭防爆设计，杜绝燃爆风险，保障连续化生产的人与资产安全
  Through ATEX explosion-proof certification and highly enclosed explosion-proof design, the risk of combustion and explosion is eliminated, ensuring the safety of people and assets in continuous production
- 自主研发硫化物专用双端面机械密封，有效控制高活性浆料泄漏，保障系统长期稳定运行
  Independently developed sulfide special double end mechanical seal, effectively controlling high activity slurry leakage and ensuring long-term stable operation of the system
- MES中控管理，可远程监控与操作，工艺可追溯、可重复，确保生产安全与高效
  MES central control management enables remote monitoring and operation, with traceable and repeatable processes to ensure production safety and efficiency
- 全程精准控温，误差小，确保材料纯度、晶型一致性与反应效率
  Accurate temperature control throughout the entire process, with minimal errors, ensuring material purity, crystal consistency, and reaction efficiency

应用行业 / Application industries

硫化物固态电解质： 硫化锂磷基电解质、LGPS锂锗磷硫，Li3PS4，硫银锗矿型LPSC和LSPSC
Sulfide solid electrolytes: lithium sulfide phosphorus based electrolytes, LGPS lithium germanium phosphorus sulfur, Li3PS4, Sulfur silver germanium ore type LPSC and LSPSC

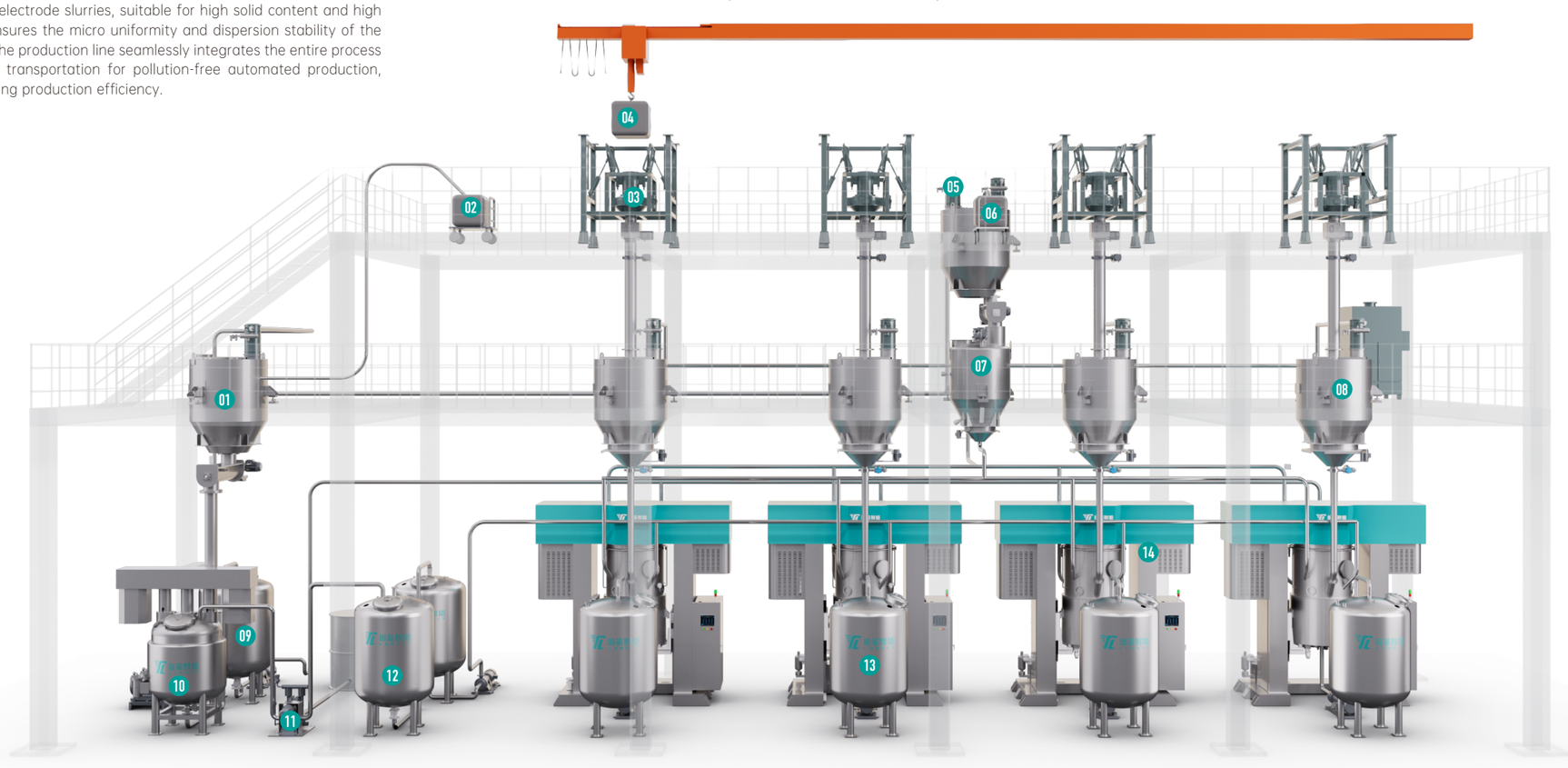
PLANETARY MIXING AUTOMATIC PRODUCTION LINE FOR BATTERY SLURRY

双行星匀浆自动化产线

专为锂电正负极浆料制备打造，适配高固含、高粘度体系。核心采用双行星搅拌技术，通过低速搅拌与高速分散的双重作用，确保浆料微观均匀性与分散稳定性。产线无缝集成投料、混合、分散至中转全流程，实现全密闭管道输送无污染的自动化生产，保证后续浆料涂层性能的一致性，同时提高生产效率。

Specially designed for the preparation of lithium battery positive and negative electrode slurries, suitable for high solid content and high viscosity systems. The core adopts dual planetary stirring technology, which ensures the micro uniformity and dispersion stability of the slurry through the dual effects of low-speed stirring and high-speed dispersion. The production line seamlessly integrates the entire process of feeding, mixing, dispersion, and transfer, achieving fully enclosed pipeline transportation for pollution-free automated production, ensuring the consistency of subsequent slurry coating performance, and improving production efficiency.

01 溶剂罐 Solvent tank
02 物料A Material A
03 吨包投料站 Ton package feeding station
04 行吊 Overhead crane
05 储料罐 Storage tank
06 物料B Material B
07 计量罐 Measuring tank
08 计量罐 Measuring tank
09 中转罐 Buffer tank
10 制胶机 Glue making machine
11 NMP溶剂罐 NMP solvent tank
12 中转罐 Buffer tank
13 涂布储罐 Coating tank
14 行星搅拌机 Planetary Mixer



产品特性 / Product Features

- 通过力学分析与高精度加工，优化轴承设计，严控运行偏差，确保工艺的长期稳定性与可靠性
  Through mechanical analysis and high-precision machining, optimize bearing design, strictly control operating deviations, and ensure the long-term stability and reliability of the process
- 双重金属把关与三重防漏油设计，结合全流程空气隔绝，杜绝铜铁锌及油污污染，保障材料纯净度
  Double metal control and triple oil leakage prevention design, combined with full process air isolation, eliminate copper, iron, zinc and oil pollution, and ensure material purity
- 剪切力精准匹配，避免破坏胶液分子链，最大限度保护活性物质的表面结构及包覆层，保证胶液特性
  Accurate matching of shear force to avoid damaging the molecular chain of the adhesive solution, maximizing the protection of the surface structure and coating layer of the active substance, and ensuring the characteristics of the adhesive solution
- MES中控管理，减少人为操作误差与管理风险，提升浆料批次一致性与生产良率
  MES central control management reduces human operation errors and management risks, improves consistency of pulp batches and production yield
- 优化结构设计，缩短换产清洗时间，降低设备维护与停机成本，提升产线综合利用率
  Optimize structural design, shorten production and cleaning time, reduce equipment maintenance and downtime costs, and improve the comprehensive utilization rate of the production line

主要工艺 / Main process

粉体配料 Powder ingredients → 溶剂配料 Solvent ingredients → 计量称重 Weighing and measuring → 混合分散 Mixed dispersion → 制胶 Glue making → 行星搅拌 Planetary Stirring → 除铁过滤 Iron removal filtration → 中转储存 Transit storage → 涂布 Coating

应用行业 / Application industries

主要用于锂电池正负极浆液、电子电极浆料，也适配粘合剂、密封剂、厌氧胶、油墨等电子、化工、食品、化妆品、制药、建材、农药行业

Mainly used for lithium battery cathode and anode slurry, electronic electrode slurry, and also suitable for adhesives, sealants, anaerobic adhesives, inks and other electronic, chemical, food, cosmetics, pharmaceutical, building materials, pesticide industries

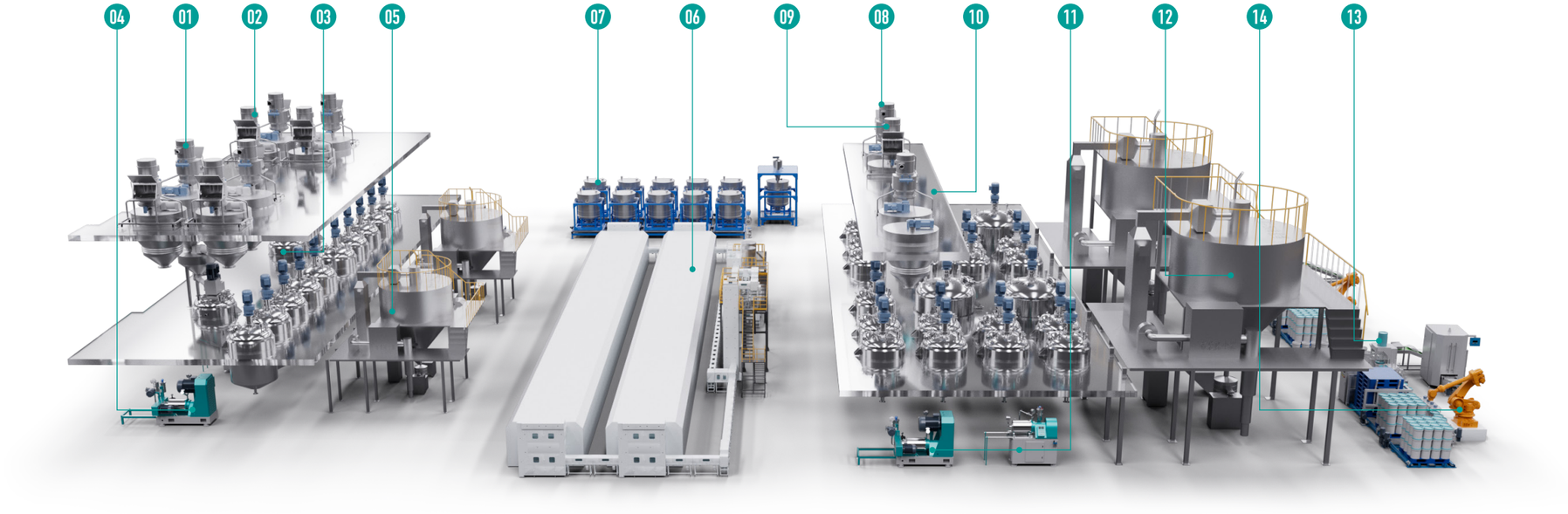
ELECTRONIC CERAMIC AUTOMATIC PRODUCTION LINE

电子陶瓷自动化产线

按照行业4.0标准设计，集成高精度配料、纳米砂磨（D90≤500nm等）、可控干燥、智能烧结及精细粉碎系统的全流程自动产线，将各工序合理、有序、协调地串联起来，解决生产中批次不稳定、人为误差大、能耗高等痛点，确保陶瓷粉体具备超高纯度、粒径分布集中及卓越的介电/压电性能，为MLCC、压电陶瓷等高端元件提供坚实的材料基础。

Designed according to Industry 4.0 standards, this fully automated production line integrates high-precision batching, nano sand grinding (D90 ≤ 500nm, etc.), controllable drying, intelligent sintering, and fine crushing systems. It connects each process in a reasonable, orderly, and coordinated manner to solve the pain points of batch instability, large human error, and high energy consumption in production. It ensures that ceramic powders have ultra-high purity, concentrated particle size distribution, and excellent dielectric/piezoelectric properties, providing a solid material foundation for high-end components such as MLCC and piezoelectric ceramics.

01 无尘投料站 Dust-free feeding station
02 计量仓 Measuring bin
03 预混罐 Pre mixing tank
04 砂磨机 Bead mill
05 喷雾干燥机 Spray dryer
06 烧结窑炉 Sintering kiln
07 移动料仓 Mobile hopper
08 无尘投料站 Dust-free feeding station
09 计量仓 Measuring bin
10 预混罐 Pre mixing tank
11 砂磨机 Bead mill
12 喷雾干燥塔 Spray drying tower
13 包装机组 packaging unit
14 码垛机器人 Palletizing robot



产品特性 / Product Features

- 高精度计量称重系统（误差≤0.2%），人工操作误差低，批次间的配方和工艺可稳定高度重复
  High precision measuring and weighing system (error ≤ 0.2%), low manual operation error, stable and highly repetitive formula and process between batches
- 高效冷却温控系统，研磨温度稳定在38℃-45℃区间，保护粉体晶体结构，维持高介电常数
  Efficient cooling and temperature control system, grinding temperature stable in the range of 38 ℃ -45 ℃, protecting powder crystal structure and maintaining high dielectric constant
- 全陶瓷材质选配+全封闭式管道输送，金属异物和杂质严格可控，保障介质层高绝缘电阻
  All ceramic material selection+fully enclosed pipeline transportation, strict control of metal foreign objects and impurities, ensuring high insulation resistance of the medium layer
- 产线自动化程度高，搭载MES中控系统，从投料到包装全流程可自动化监控与数据追溯
  The production line has a high degree of automation, equipped with MES central control system, which can automatically monitor and trace data throughout the entire process from feeding to packaging

主要工艺 / Main process

配料预混 Pre mixing of ingredients → 粗磨/细磨 Coarse/Fine Grinding → 喷雾干燥 Spray drying → 窑炉烧结 Kiln sintering → 压块 Briquette → 粉碎 Smash → 二次烧结 Secondary sintering → 二次预混 Secondary premixing → 粗磨/细磨 Coarse/Fine Grinding → 二次干燥 Secondary drying → 除铁过筛 Iron removal screening → 成品包装 Finished product packaging

应用行业 / Application industries

电子陶瓷材料，包括MLCC(贴片电容)材料、LTCC(低温共烧陶瓷)材料、HTCC（高温共烧陶瓷）压敏电阻材料、钛酸钡材料等

Electronic ceramic materials, including MLCC (surface mount capacitor) materials, LTCC (low-temperature co fired ceramic) materials, HTCC (high-temperature co fired ceramic) varistor materials, barium titanate materials, etc

COATING MATERIALS AUTOMATIC PRODUCTION LINE

涂料自动化产线

全流程闭环一体化成套设备，用于油漆、油墨、涂料等精细化工行业，集全自动配料、高效分散研磨、精密过滤、智能调色及智能化灌装码垛五大核心模块于一体，解决传统工艺中人工投料误差大、批次色差不稳、工作环境脏乱及VOCs排放难控等问题，确保产品批次稳定性，实现节能降耗与车间洁净化生产，助力涂料企业实现数字化工厂转型。

A complete set of closed-loop integrated equipment for the fine chemical industry such as paint, ink, and coatings, integrating five core modules: fully automatic batching, efficient dispersion and grinding, precision filtration, intelligent color matching, and intelligent filling and palletizing. It solves the problems of large manual feeding errors, unstable batch color differences, dirty and chaotic working environment, and difficult control of VOCs emissions in traditional processes, ensuring product batch stability, achieving energy saving and consumption reduction, and clean workshop production, and helping coating enterprises achieve digital factory transformation.

01 溶剂/树脂储存区
Solvent/resin storage area

02 溶剂/树脂储存区
Solvent/resin storage area

03 溶剂/树脂储存/计量区
Solvent/resin storage/metering area

04 粉体储存区
Powder storage area

05 分散区
Dispersed area

06 粉体输送
Powder conveying

07 助剂储存计量区
Additive storage and metering area

08 研磨区
Grinding area

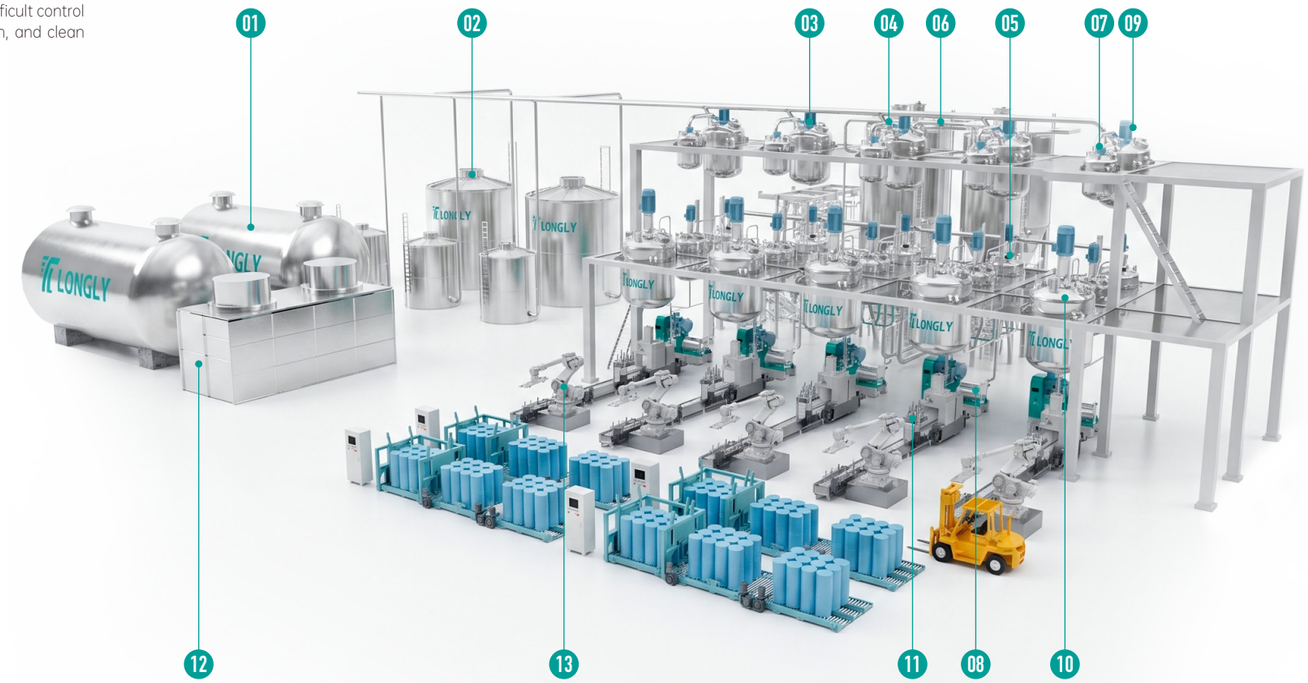
09 色浆中转/储存区
Color paste transfer/storage area

10 调漆区
Paint mixing area

11 灌装区
Filling Area

12 集尘区
Dust collection area

13 码垛区
Stacking area



主要工艺 / Main process

配液 solution preparation → 计量称重 weighing and measuring → 混合上料 Mixed feeding → 预混分散 Pre mixed dispersion → 研磨解聚 Grinding depolymerization → 配方调制(调色) Formula preparation (color matching) → 过滤 Filter → 输送 Transport → 灌装码垛 Filling and palletizing

产品特性 / Product Features

- 产线配置合理，设备布局科学，兼容油漆、涂料等多细分行业的高效生产
  Reasonable production line configuration, scientific equipment layout, compatible with efficient production in multiple segmented industries such as paint and coatings
- 模块化设计，支持快速清洗换色，可根据客户需求灵活定制，应对多品种、小批量工艺
  Modular design, supports quick cleaning and color change, can be flexibly customized according to customer needs, and can cope with multiple varieties and small batch processes
- 高精度计量称重与MES中控管理，全流程数据可追溯与防错，确保配方零误差与批次稳定
  High precision measurement and weighing with MES central control management, full process data traceability and error prevention, ensuring zero formula errors and batch stability
- 贯彻可持续发展，严控VOCs排放与物料损耗，减少污染和资源浪费，符合国际国内环保标准（如欧盟REACH）
  Implement sustainable development, strictly control VOCs emissions and material loss, reduce pollution and resource waste, and comply with international and domestic environmental standards (such as EU REACH)

应用行业 / Application industries

数码喷墨： UV油墨、陶瓷喷墨、专用墨水
印刷油墨： 胶印油墨、凹印油墨、柔印油墨、丝网油墨、喷墨油墨、导电油墨
涂料： 建筑涂料、工业涂料、油漆、印染材料、胶黏剂、色浆

Digital inkjet: UV ink, ceramic inkjet, specialized ink
Printing ink: offset printing ink, gravure printing ink, flexographic printing ink, screen printing ink, inkjet ink, conductive ink
Coatings: architectural coatings, industrial coatings, paints, printing and dyeing materials, adhesives, colorants