

Wet grinding specialist—Wet grinding solution supplier

PROFESSIONAL WET GRINDING EQUIPMENT MANUFACTURERS

专业的湿法研磨设备制造商



上海儒特机电设备有限公司

Shanghai Root Mechanical and Electrical Equipment Co., Ltd



SHANGHAI ROOT MECHANICAL AND
ELECTRICAL EQUIPMENT CO.,LTD
上海儒特机电设备有限公司

TEL:+86 21 6901 7353
FAX:+86 21 6901 7359
Email:info/service@root-asia.com
www.rootasia.cn/www.root-asia.com

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GROUP INTRODUCTION

儒特集团简介

上海儒特集团下属子公司--上海儒特机电设备有限公司、致磨（上海）新材料科技有限公司、上海驰翔新能源设备科技有限公司、上海赛耳化工工程有限公司、安徽儒特实业有限公司。上海赛耳化工工程技术有限公司专注于精细化工工程总包项目，年销售额约2亿元人民币；致磨（上海）新材料科技有限公司主营抛光磨料和研磨介质，年销售额约5000万人民币，产品远销全球八十多个国家；上海儒特机电设备有限公司主营湿法研磨设备，年产值约1亿人民币左右；上海驰翔新能源设备科技有限公司主营产品是粉体输送设备，年产值3000万人民币左右；安徽儒特实业有限公司占地4.4万余平方米，具备年产1000台高精机械设备的加工实力，可以确保儒特产品的质量和供货周期。

Shanghai Root Mechanical and Electrical Equipment Co.,Ltd is one of the branches company of Shanghai Root Group. Besides of Shanghai Root Mechanical and Electrical Equipment Co.,Ltd,Root group has four other branch companies,who can serve almost all the fine chemical industries.Shanghai Sailing Engineering Technology Co.,Ltd has been focusing on the EPC project of find chemical industries;ZHIMO(shanghai) New Material Technology Co.,Ltd has been focusing on the manufacturing and sales of grinding media, ceramic structural parts and other ceramic related products;Shanghai Cisun New Energy Equipment & Technology Co.,Ltd is professional manufacturer of mixing equipment and chemical vessels,the core-tech product is the planetary mixing machine.Anhui Root Industrial Co., Ltd is Group's production center located in An' hui province China.Covering an area of 4,4000 square meters,with a strong processing capacity of annual 1000 units high-precision machinery and equipment,we can ensure the high quality of Root equipment and leading time.

COMPANY INTRODUCTION 公司简介



上海儒特机电设备有限公司隶属于上海儒特集团，成立于2012年，专注于湿法研磨设备，经过多年发展与积累，目前已成为行业内颇具影响力的湿法研磨设备生产制造商之一。

上海儒特机电设备有限公司市场定位简单而清晰，力求做精做专，只做一种设备。目前已形成从实验室至工业生产6个系列近60个型号的湿法研磨砂磨机设备，满足不同行业客户的研发及生产需求。迄今为止，上海儒特机电设备有限公司已向国内外输出数万台合格设备，涉及涂料、油墨、墨水、染料、农药、非矿业、陶瓷、电池等几十个行业，并取得了客户的一致好评。

“基于技术，胜于品质”是上海儒特机电设备有限公司发展历程中最长久的坚守。基于技术，以客户需求为导向，以研磨工艺为基准，为用户提供适合于用户物料的湿法研磨解决方案；胜于品质，以合理的价格，做优质的设备，为用户创造更高的产品价值。上海儒特机电设备有限公司每年在技术研发方面的投入占公司全年利润的5%，目前已获得新型实用专利证书10余个，同时与上海、安徽各大高校合作，为公司的技术发展和人才储备铺垫了很好的道路。上海儒特机电设备有限公司拥有现代化的微米级研磨研究室，并与中科院纳米研究所、中国化工研究院、清华大学、中国农业大学、北京科技大学、安徽理工大学、上海硅酸盐研究所等众多科研机构合作；拥有先进的纳米级研磨设备及检测仪器，迄今为止已为众多企业提供详细实验数据，为广大客户的设备选型、新产品研发、加工工艺优化提供有力保障。

在全球经济的驱动下，上海儒特机电设备有限公司于2013年开始探索国际市场并致力于国际代理商网络的搭建，为全球用户提供贴心、及时、周到的本土化服务，截至目前，儒特已在台湾、泰国、印度、巴基斯坦、巴西、美国、俄罗斯等近二十个国家和地区已经正式设立了服务代理机构。

Shanghai Root Mechanical And Electrical Equipment Co.,Ltd, a branch company of Shanghai Root Group , established in 2012 and devoted to the research and production of wet grinding equipment, has become one of the leading wet grinding equipment manufacturer after years of development.

Shanghai Root Mechanical And Electrical Equipment Co.,Ltd focuses all the efforts in the research and production of wet grinding equipment-horizontal sand mill. Now Root has totally 6 series and 60 models of wet grinding equipment, from laboratory to industrial production, fulfilling the research and production requirement of customers from different industries. Till now, Root has provided thousands sets of wet grinding equipment for industries of coating, printing ink, ink, dye, pesticide, mineral, ceramic, inkjet ink, MLCC, battery etc in both domestic and foreign markets and won smiles from every corner of the world.

During the development of Root, we still hold firmly to our motto “Based in Technology, Win in Quality” . “Based in Technology” : Directed by customer’ s requirement and based in the grinding technology, provide the most suitable grinding solution to customer; “Win in Quality” : To make high-quality equipment at the most reasonable price, to create more product value. The annual investment in technology has been 5% of the total profit amount. Till now, Root has got 17 patents for horizontal sand mills. At the sametime, Root owns the very modern micro-nano grinding laboratory and cooperates with institutes and universities, CAS nano material study institute, Chinese chemical study institute, Qinghua University, CAU, AUST etc. Till now, ROOT R&D center has done hundreds of experiment and provided detailed experiment report for many corporations, strongly guarantee the following model-selection, new-formulation research and grinding process optimizing.

From the year 2013, Root has started to establish global agent system. Now Root products have been applied in more than 80 countries and has set up agent system in more than 20 countries and areas, such as Thailand, India, Pakistan, Brazil, USA, Russia and Taiwan. all users will enjoy timely and comprehensive local services

CORPORATION HONOR 企业荣誉



Corporate culture:
Grateful, Sincere, Rigorous, Innovative
企业文化: 感恩、诚信、严谨、创新

企业荣誉 CORPORATION HONOR



纳米级研磨实验室
Nano Grade Grinding Lab



PSS纳米级粒径分析仪
PSS Nano Grade Granulometer



销售精英团队
Sales Team



安徽儒特实业有限公司
Anhui ROOT Industrial Co., Ltd

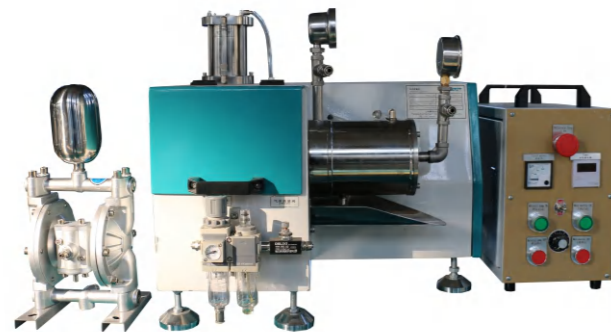
ENTERPRISE ORGANIZATION 企业机构

- 儒特上海营销商务中心**
ROOT SHANGHAI SALES CENTER
 专注于儒特公司全球市场的市场营销和商务工作，拥有专业的团队，位于交通便利的上海市虹桥区，距离虹桥枢纽10公里。
- 儒特上海技术发展中心**
ROOT SHANGHAI R&D CENTER
 专注于儒特公司的技术开发和技术积累，是儒特公司连接市场和产品之间最重要的纽带之一，团队组成皆是湿法研磨领域的精英人物，由清华大学的专家领队。拥有美国PSS品牌激光粒度检测设备和丹东百特激光粒度检测设备、超声波振荡仪、染料分散测试仪、烘箱、硬度计、电镜等仪器，可以为不同的客户提供针对性的特色检测服务。同时儒特与安徽理工大学国家级流体力学实验室进行全面战略合作，真正实现研磨机械设计、流体力学与化工工艺三维有机结合。
- 儒特上海客户服务中心**
ROOT SHANGHAI AFTER-SALE SERVICE CENTER
 专注于儒特公司全球客户的售中、售后的服务工作，行业内首个提出半年保养一次设备的理念，立志于将客户价值最大化，团队由多名资深工程师组成。位于交通便利的上海市虹桥区，距离虹桥枢纽10公里。
- 儒特生产加工中心**
ROOT MANUFACTURING CENTER
 由上海江桥生产装配工厂和安徽儒特实业有限公司生产中心组成，安徽儒特实业有限公司占地4.4万平方米，拥有强大的加工实力，根据市场和机型的不同，两个工厂分工明确，可以确保儒特产品的质量和供货周期。

LAB SERIES SAND MILL 实验室系列砂磨机



RTSM-0.2BJ



RTSM-0.5AD



产品概述 / Product description

实验式系列砂磨机广泛应用于小批量物料的循环研磨、配方研究，研磨腔容积有0.2、0.5、1.0、2.0L，精密可靠的机械密封，避免空气混入，防止气泡产生和溶剂挥发，减轻环境污染。

ROOT laboratory series of Horizontal Sand Mills are widely used in the cyclic grinding and formula research of small batches of materials, have different grinding chambers as volume of 0.2L, 0.5L, 1.0L and 2.0L, precision and reliable mechanical seals are effectively prevent air leaking, air bubbles and solvent evaporation, keep reducing potential environmental pollution.

产品特性 / Product features

- 动/静态的出料方式
- 可选用滤网式分离器
- 研磨效率高，D90可达100nm
- 转子及筒体可选用陶瓷、聚氨酯及合金钢材质
- 输送系统可选用气动隔膜泵、蠕动泵等
- PLC控制系统,触摸屏面板操作更加简单方便
- 整机结构设计合理，占地小易清洗且美观大方
- 运行平稳无振动无噪音
- Dynamic/Static material discharging.
- Screen separator optional.
- High grinding efficiency, D90 could achieve 100 nanometers.
- Rotor and chamber could be made by ceramic, polyurethane (PU) and alloy steel.
- Material conveying system may choose pneumatic diaphragm pump, peristaltic pump and so on.
- PLC Control system, easy to operate with touch screen panel.
- Reasonable structure design for entire machine, small place occupy, easy to clean and beautiful look.
- Steadily working without vibration and noise.

应用范围 / Application range

主要应用于精细化工领域微米级研磨，适用于高校、科研单位及生产型企业等科学研究、配方研发中小样试生产及小批量生产。

Mainly used for micron-nano grade grinding in the field of super fine chemical industry, suitable for scientific research, formulate research, small sample trial production and small batch production in universities, research and development institutions and productive enterprises.

客户案例 / Customer case



型号 Model	研磨缸容积(L) Chamber volume	功率(KW) Motor Power	转速(rpm) Speed	介质 (mm) Medium Size	重量 (kg) Weight	外形尺寸(mm) Dimension
RTSM-0.2BJ	0.2	1.1	2840	0.4-1.0	80	550x400x850
RTSM-0.5AD	0.5	2.2	2840	0.6-1.0	80	520x400x460
RTSM-0.5BJD	0.5	4	3400	0.3-1.0	150	750x600x700
RTSM-1.0BJD	1.0	4	3400	0.2-1.0	150	750x600x700
RTSM-1.0BD	1.0	4	3400	0.6-1.0	150	750x600x700

根据不同物料需求，转子及内筒体可用陶瓷或PU材质。

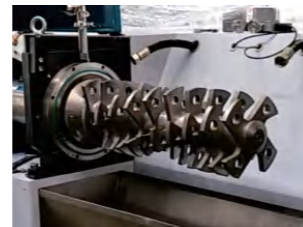
According to different material, we could also select ceramic or PU material for rotor and inner chamber

RTSM-AD SEREIS SAND MILL

RTSM-AD盘式卧式砂磨机



RTSM-50ADL

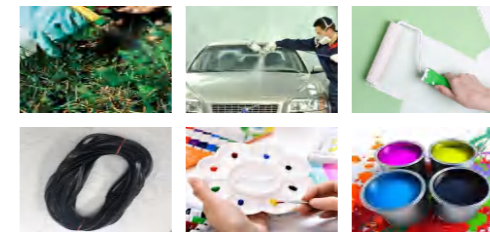


产品特性 / Product features

- 双端面机械密封
- 动态分离盘顺利出料
- 多重冷却，合理控制物料温度
- 可选变频调速，PLC控制系统
- 自动保护系统，安全性能高
- 进料装置可根据物料选不同的泵
- 转子及筒体可选用陶瓷、聚氨酯及耐磨合金钢材质
- 高耐磨合金钢筒体，也可选配304+表面喷涂筒体
- 研磨效率高、故障率低、性价比高、维护方便
- Double end mechanical seal
- Material will be discharged from dynamic separating ring smoothly
- Multiple water cooling system can control the temperature effectively
- VFD and PLC are optional
- Self-protection system with high security performance
- Depend on material types, various pumps are optional for feeding
- Rotor and grinding chamber can use ceramic, PU and high wear-resistance hard alloy
- Outer cylinder material of wear-resistant hard alloy chamber could use 304 stainless steel with surface coating
- High grinding efficiency, low failure rate, cost-effective and easy to maintain

应用范围 / Application range

- 农药行业
- 汽车漆行业
- 涂料行业
- 橡胶行业
- 颜料行业
- 油墨行业



- Pesticide industry
- Automotive paint industry
- Coating industry
- Rubber industry
- Pigment industry
- Ink industry

客户案例 / Customer case



产品概述 / Product description

RTSM-AD (L) 系列砂磨机广泛应用于固含量和粘度较高的物料分散与研磨，具有专利技术的盘式结构可满足不同物料、细度的研磨要求。

RTSM-AD(L) series Horizontal Sand Mills are widely used in dispersing and grinding of high solid content and high viscosity materials, the disc structure with patented technology could meet the grinding requirements of different material and fineness.

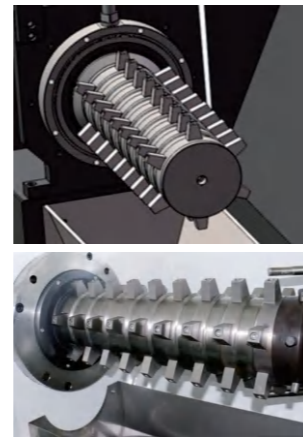
型号 Model	研磨缸容积(L) Volume	功率(KW) Motor Power	介质 (mm) Media Size	转速(rpm) Speed	重量 (KG) Weight	外形尺寸(mm) Dimension
RTSM-10AD	10	15	0.8-3.0	1125	850	1200x850x1100
RTSM-30AD	30	37	0.8-3.0	900	1200	1300x1050x1600
RTSM-50AD	50	45	0.8-3.0	687	1500	1400x1150x1650
RTSM-50AD(L)	50	37	0.6-3.0	770	1250	1750x1100x1750

根据不同物料需求，转子及内筒体可用陶瓷或PU材质
According to different material, we could also select ceramic or PU material for rotor and inner chamber

RTSM-BD SERIES SAND MILL RTSM-BD棒销式卧式砂磨机



RTSM-30BD



产品概述 / Product description

RTSM-BD系列砂磨机广泛应用于微米级、亚微米级、纳米级的中高粘度物料的研磨，动静环间隙出料，棒销转子结构满足不同尺寸、不同研磨细度以及不同研磨工艺的生产需求。

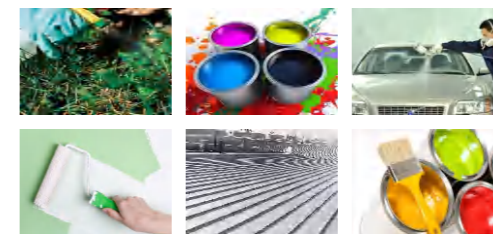
RTSM-BD series sand mills are widely applied for micron grade, sub-micron grade and nano grade grinding, and are able to handle middle or high viscosity material. This series sand mills use dynamic discharging, the pin type rotor are applied in the grinding process of different feeding size, different final fineness requirements.

产品特性 / Product features

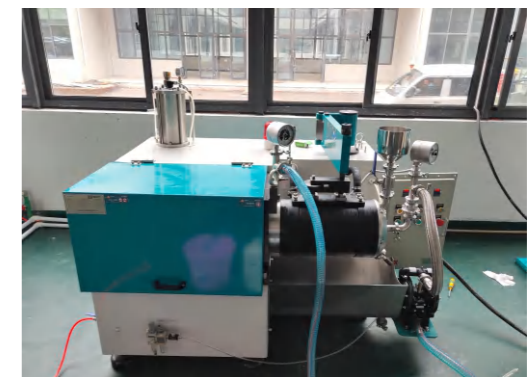
- 三重冷却，效果更佳
- 变频调速、PLC控制
- 双端面机械密封
- 大流量动态分离盘顺利出料
- 棒销转子结构，研磨效率提升2-3倍
- 可选耐磨合金钢、PU、陶瓷等研磨缸体材质
- Triple cooling system for better temperature control
- VFD and PLC are optional
- Double end mechanical seal
- Large flow material will be discharged from dynamic separating ring smoothly
- Pin type rotor with high grinding efficiency, 2-3 times higher than traditional mills
- Grinding chamber can use high wear-resistance hard alloy, PU and ceramic material

应用范围 / Application range

- 农药行业
- 油墨行业
- 汽车漆行业
- 涂料行业
- 防腐漆行业
- 油漆行业
- Pesticide industry
- Ink industry
- Automotive paint industry
- Coating industry
- Anticorrosive paint industry
- Paint industry



客户案例 / Customer case

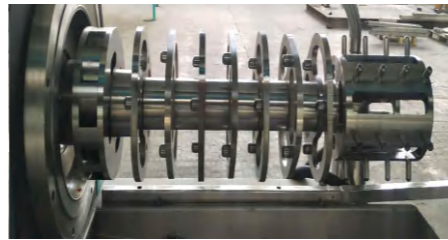
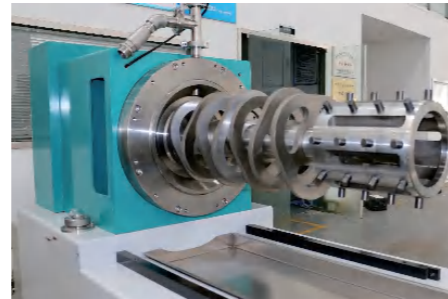


型号 Model	研磨缸容积(L) Volume	功率(KW) Motor Power	转速(rpm) Speed	介质(mm) Media Size	重量 (kg) Weight	外形尺寸(mm) Dimension
RTSM-10BD	10	22	925	0.8-3.0	800	1200x850x1100
RTSM-30BD	30	37/45	687	0.8-3.0	1600	2020x1120x1700
RTSM-50BD	50	45/55	750	0.8-3.0	1800	2100x1200x1750

RTSM-AJ SERIES SAND MILL RTSM-AJ盘式卧式砂磨机



RTSM-60AJ



RTSM-100AJ



产品概述 / Product description

RTSM-AJ系列砂磨机广泛应用于水性，低粘度物料的研磨，可实现单机循环研磨，双机串联研磨等不同工艺，流量更大、产量更高、研磨细度更好、粒度分布更均匀。

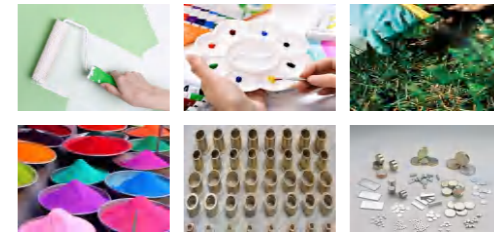
RTSM-AJ series sand mills with larger flow rate, higher productivity, better finish size and distribution, which are widely used in water-based and low viscosity material grinding. It's workable for different grinding process such as single set recycling grinding and double tanks grinding.

产品特性 / Product features

- 静态筛网出料
- 变频调速、PLC控制
- 四重水冷却方式控制物料温度
- 自动保护系统，安全性能高
- 进料装置可根据物料选不同的泵
- 转子及筒体可选用陶瓷、聚氨酯及耐磨合金钢材质
- Static screen discharging
- VFD control, PLC control is optional
- Quadruple water cooling method to control material temperature
- Automatic protection system with high safety performance
- Feeding device can choose different pumps according to product types
- Rotor and inner chamber can be made of ceramic, polyurethane and wear-resistant alloy steel

应用范围 / Application range

- 涂料行业
- 颜料行业
- 农药行业
- 染料行业
- 粉末冶金材料行业
- 磁性材料行业
- Coating industry
- Pigment industry
- Pesticide industry
- Dye industry
- Powder metallurgy materials industry
- Magnetic materials industry



客户案例 / Customer case



型号 Model	研磨缸容积(L) Volume	功率(KW) Motor Power	转速 (rpm) Speed	介质 (mm) Media Size	重量 (KG) Weight	外形尺寸(mm) Dimension
RTSM-10AJ(P)	10	18.5	1440	0.3-2.0	700	1460x1150x1250
RTSM-30AJ(P)	30	37	1250	0.3-2.0	1500	1930x1085x1450
RTSM-60AJ(P)	60	45	880	0.3-2.0	1800	2000x1240x2000
RTSM-100AJ(P)	100	55/75	666	0.3-2.0	2000	2550x1300x2150
RTSM-300AJ(P)	300	110/132	780	0.3-2.0	5500	3250x1480x2470

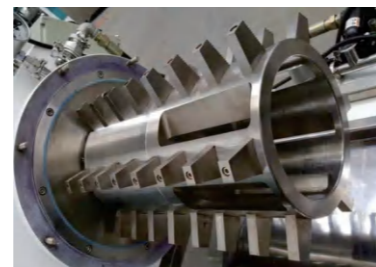
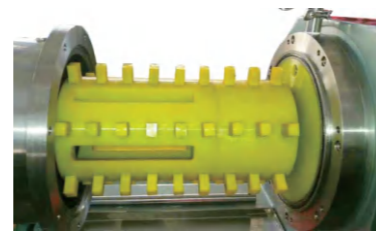
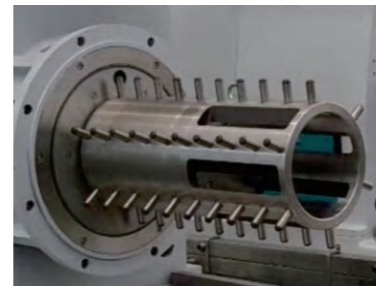
根据不同物料需求，转子及内筒体可用陶瓷或PU材质
According to different material, we could also select ceramic or PU material for rotor and inner chamber

RTSM-BJ SERIES SAND MILL

RTSM-BJ棒销式卧式砂磨机



RTSM-30BJ

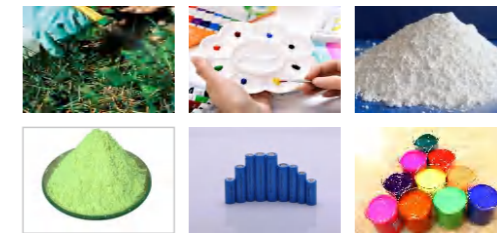


产品特性 / Product features

- 静态筛网出料
- 三重冷却，效果更佳
- 变频调速、PLC控制
- 棒销转子结构，研磨效率提升2-3倍
- 整机美观大方，设备运行平稳，无振动，无噪音
- Static screen discharging
- Triple cooling system for better temperature control
- VFD control, PLC control is optional
- Pin type rotor with high grinding efficiency, 2-3 times higher than traditional mills
- The overall appearance is good, the equipment operates smoothly, no vibration, no noise

应用范围 / Application range

- 农药行业
- 颜料行业
- 钛白粉行业
- 荧光增白剂行业
- 电池正负极行业
- 色浆行业
- Pesticide industry
- Pigment industry
- Titanium Dioxide Industry
- Optical brightener industry
- Battery positive and negative electrode industry
- Color paste industry



客户案例 / Customer case



产品概述 / Product description

RTSM-BJ系列砂磨机是对传统棒销砂磨机升级改造的新型纳米研磨设备，研磨效率和产量显著提升，适用于中低粘度、流动性较好的物料的微米级和纳米级研磨。

RTSM-BJ series sand mill is a new type of nano-grinding equipment upgraded from the traditional pin type sand mill. The grinding efficiency and output are significantly improved. It is suitable for micro and nano level grinding of low viscosity, fluid materials.

型号 Model	研磨缸容积(L) Volume	功率(KW) Motor Power	转速(rpm) Speed	介质(mm) Media Size	重量 (kg) Weight	外形尺寸(mm) Dimension
RTSM-6BJ	6	15	1640	0.2-2.0	450	1260x1160x1250
RTSM-10BJ	10	22	1100	0.2-2.0	750	1655x1050x1550
RTSM-30BJ	30	37	860	0.2-2.0	1600	1800x1050x1800
RTSM-60BJ	60	75	660	0.2-2.0	2500	2050x1400x2250
RTSM-90BJ	90	110	550	0.2-2.0	4500	2500x1050x2200
RTSM-150BJ	150	160	480	0.2-2.0	5000	2750x1690x2650

RTSM-CJ SERIES SAND MILL RTSM-CJ涡轮式卧式砂磨机



RTSM-30CJ



产品概述 / Product description

RTSM-CJ系列涡轮静态卧式砂磨机属于高能量、纳米级别研磨设备，本系列机型转子部分采用离心涡轮转子+静态自清洗筛网式出料结构，设备高速运行时，涡轮转子将物料瞬间分散，大颗粒物料处于高能区研磨，在离心作用下，大颗粒物料在破碎后继续循环研磨，在此循环过程中破碎后颗粒进行助剂包裹，避免因破碎速度过快，造成助剂包裹不及时，出现团聚、返粗等现象。颗粒达到一定细度后，在泵推力作用下，送出研磨区域。因此，涡轮砂磨机研磨颗粒的粒径更加均匀，能量利用率高。

RTSM-CJ series turbine static horizontal sand mill is a high-energy, nano-level grinding equipment. The rotor part adopts centrifugal turbine rotor + static self-cleaning screen type discharge structure. When the equipment runs at high speed, the turbine rotor disperses the material instantaneously, and the large-particle materials are ground in the high-energy zone. Under the centrifugal action, the large-particle materials continue to circulate grinding after being crushed. The particles are

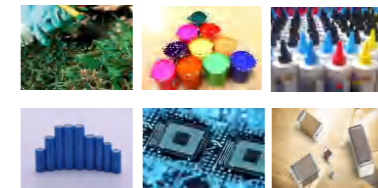
wrapped in the auxiliary agent after being broken in this cycle process, to avoid the phenomenon that the auxiliary agent is not wrapped in time, agglomeration and coarsening is caused due to the excessive breaking speed. After the particles reach a certain fineness, they are sent out of the grinding area under the action of the pump. Therefore, the energy utilization of the turbo sand mill is higher, and the particle size is more uniform.

产品特性 / Product features

- 研磨效率高，能量利用率高，与传统同款盘式砂磨机对比，研磨效率高1倍以上；
High efficiency of grinding and energy utilization. Compared to same old disc type bead mill, the efficiency of grinding more than doubled.
- 料温控制好，适合低熔点产品，涡轮拨珠的能量比较均匀柔和，不会造成局部或瞬间物料能量过高，造成物料出现膏化或团聚情况；
Better material temperature control and suitable for low melting point material. Turbo disc will stir grinding beads in a smooth way, which in short time won't bring high energy in certain area and won't cause material creaming and agglomeration.
- 粒径控制非常均匀，适合产品品质要求较高的低粘度物料，尤其适合纳米材料的精细研磨；
The particle size control is very uniform, suitable for low viscosity materials with high product requirements, especially for fine grinding of nano materials;
- 物料气泡控制好，适合容易发泡的产品；
Better foaming control, suitable for easily foamed material.
- 直接输入配方，砂磨机一键启动，避免人工因素造成产品的不稳定；
Input formulation directly and operate sand mill by one-button start, which can avoid error caused by human factor.
- 筛网具有自清洗功能，解决筛网堵塞情况；
Discharge screen has self-cleaning function, it can solve the problem of screen blocking.

应用范围 / Application range

- 农药液体制剂
- UV、热转印、陶瓷墨水
- 分散、还原染料
- 新能源电池正负极材料
- 半导体材料
- MLCC材料
- Pesticide liquid formulation
- UV ink, sublimation ink, ceramic ink
- Disperse dye, vat dye
- Anode and cathode materials for new energy battery
- Semiconductor materials
- MLCC material



型号 Model	研磨缸容积(L) Volume	功率(KW) Power	转速(rpm) Speed	介质(mm) Media Size	重量 (KG) Weight	外形尺寸(mm) Dimension(mm)
RTSM-15CJ	15	30	1400	0.1-1.0	900	1600*750*2010
RTSM-30CJ	30	45	1000	0.1-1.0	1200	1900*1000*2050
RTSM-60CJ	60	75	730	0.1-1.0	1800	2200*1100*2200

BASKET MILL SERIES

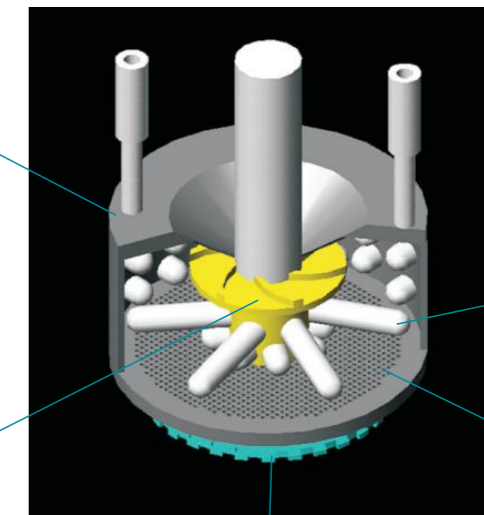
篮式研磨机



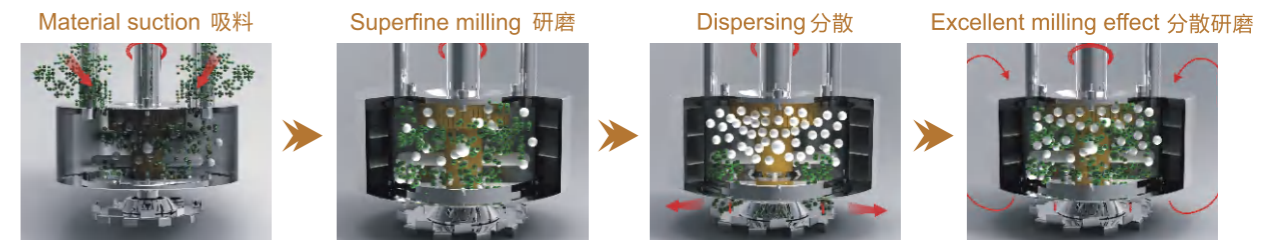
液压升降分散机
Basket mills with hydraulic lift



实验室篮式研磨机
Lab basket mill with manual lift



Grinding basket 研磨篮
Material-suction impeller 物料自吸叶轮
Zirconia deflector rod 氧化锆拨杆
Sieve (used for separating milling beads and materials) 网板 (将研磨珠和物料分开)
Dispersion disc 分散盘



工作原理 / Working principle

篮式研磨机集分散功能和研磨功能为一体，将分散、研磨两种工序由一台机器、一个容器完成。具有分散、细化、研磨功能，效率高、研磨细度好、易清洗。篮式研磨机研磨篮入口处有自吸叶轮，高速旋转时产生强大涡流，加速进料过程。物料经研磨后，从研磨篮底部出料，研磨篮下有高速分散盘，由于分散盘高效、强劲的涡流效应，增强物料分散、混合效果，加速物料的循环过程，形成吸料→研磨→分散→吸料→研磨的高效率循环，产生高效率的研磨效果。

Material is automatically sucked into grinding chamber by Self- sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.

型号 Model	功率(KW) Power	转速(rpm) Speed	升降行程(mm) Lifting Stroke	处理量(L) Capacity	研磨篮容积(L) Volume	液压站功率(mm) Hydraulic power
RTLM-4	4	0-1440	600	20-50	2	0.75
RTLM-5.5	5.5	0-1440	800	50-100	3	0.75
RTLM-7.5	7.5	0-1440	800	40-150	3.4	0.75
RTLM-11	11	0-1440	800	50-200	4.6	0.75
RTLM-15	15	0-1440	900	50-250	7.5	0.75
RTLM-18.5	18.5	0-1440	1100	80-300	15	1.1
RTLM-22	22	0-1440	1100	200-800	18	1.1
RTLM-30	30	0-1440	1100	250-1000	25	1.1
RTLM-37	37	0-1440	1100	300-1200	32	1.5
RTLM-45	45	0-1200	1200	400-1500	40	1.5
RTLM-55	55	0-1200	1200	500-2000	50	1.5

THREE ROLLER MILL 三辊研磨机

HIGH SHEAR EMULSIFICATION MACHINE 高剪切乳化机



Laboratory three roller mill
实验室三辊研磨机



Ceramic three roller mill
150L陶瓷三辊研磨机

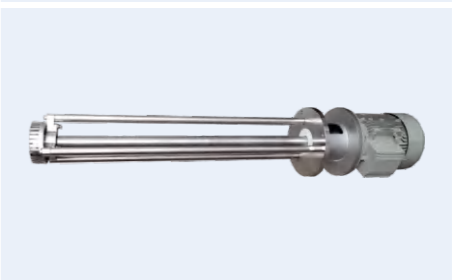


Hydraulic three roller mill
液压型三辊研磨机



线速度关系式：
 $V=N \cdot D \cdot U / 60$
V: 线速度 (m/sec)
D: 转子直径 (m)
U: 转速/分钟 (rpm)

Linear velocity equation:
 $V=N \cdot D \cdot U / 60$
V: linear velocity (m/s)
D: rotor's diameter(m)
U: revolution/minute(rpm)



工作原理 /Working principle

工作时将快、慢辊调节到适当位置，启动机器，然后将需研磨的浆料加入中辊与慢辊之间铜刀处，浆料经过中、慢辊表面研磨后，由中辊带给快辊，再由紧贴表面的出料刮刀予以刮下，通过装有挡板的刀板，流入盛料筒，由此构成整个研磨过程。

Material is automatically sucked into grinding chamber by Self-sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller.

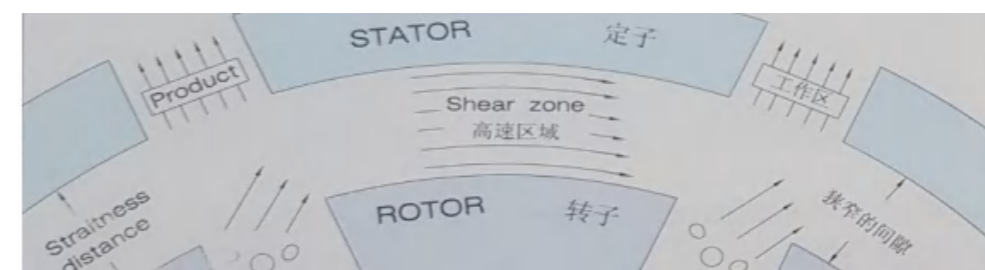
型号 Model	功率(KW) Power	滚筒直径(mm) Roller Diameter	滚筒长度(mm) Roller Length	转速(rpm) Speed(low/middle/fast)	重量 (KG) Weight
RTSG-65	0.75	65	125	410/550/450	85
RTSG-120	1.5	120	280	38/88/205	550
RTSG-150	2.2	150	300	24/79/184	600
RTSG-260	7.5	260	675	66/123/187	2368
RTSG-405	15	405	810	15/41/133	5200

工作原理 /Working principle

间歇式高剪切分散乳化均质机是通过转子高速平稳的旋转，形成高频、强烈的圆周切线速度、角向速度等综合动能效应；在定子的作用下，定、转子合理狭窄的间隙中形成强烈、往复的液力剪切、摩擦。离心挤压。液流碰撞等综合效应，物料在容器中循环往复以上工作过程，最终使不相溶或难相溶的两相或多相迅速、均匀。细腻地完成分散、乳化、均质、溶解等工艺流程，与成熟的配方和合理的添加剂（如：乳化剂、分散剂、稳定剂等）配合，最终得到高品质、稳定的产品。

Material is automatically sucked into grinding chamber by Self-sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller. Material will be ground in grinding basket.sucking impeller.

工作区域示意图 /The Stator and Rotor Workspace Graphoc Presentation



HIGH SPEED DISPERSER 高速分散机



工作原理 Working theory

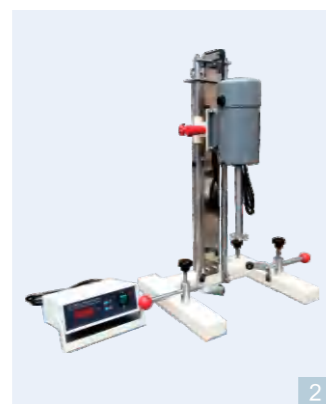
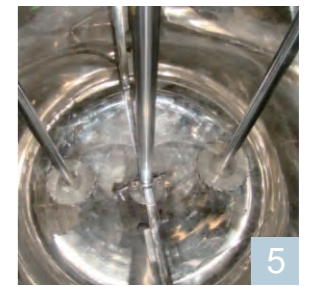
分散盘的边缘有上下交替的等距宽齿，在轴向上，齿折成一定比例的斜高，以便在分散过程中对物料产生推进作用及生成不等速的流层（在速度差中形成粘度剪力）。分散盘以较高转速平稳运行，对于物料具有一定的剪切作用及对聚集颗粒的破碎作用。在正常工作时，分散盘的旋转带动物料形成滚动的环流，且分散盘部分可见，这代表最大机械能已输入物料，且伴随着分散盘持续的转动，物料能得到充分的循环和翻动。位于物料表面的物料粒子，很快呈螺旋状下降到环流底部；在分散盘边缘2.5-5 cm处形成一个湍流区，该区域中物料粒子受到较强的剪切、冲击，很快分散到物料中。

The disc is disk-shaped, with equidistance width up and down at the edge. Slant height at axial makes pushing action and produces non-uniform flow to material when dispersing (viscosity shearing force caused by velocity contrast). Disc runs at high and stable speed, produces shearing and crashing force to material. At normal operation, rotation of disc forms rolling circulation of material, and disc can be partial seen which indicates that max mechanical energy has input material. Material can get full circulating and stirring with the continuous rotation of disc. Granulates at material surface will drop to the circulation bottom, forming a 2.5-5 cm turbulence flow at the edge of disc. Material at this district will bear strong shearing and crashing force, highly dispersing.



HIGH SPEED DISPERSER 高速分散机

1. Hydraulic lifting disperser
液压升降分散机
2. Pneumatic lifting disperser
气动升降分散机
3. Multifunctional disperser
多功能分散机
4. Two-shaft disperser
双轴分散机
5. Dispersion vessels
分散釜

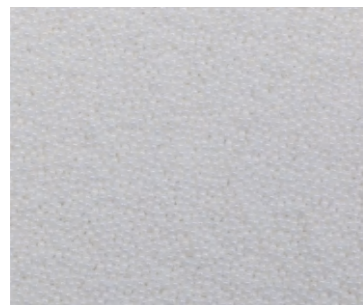


1. 300W Lab disperser
300W实验室分散机
2. 400W Lab disperser
400W实验室分散机
3. 1100W Lab disperser
1100W实验室分散机

技术参数 Technical parameter

型号 Model	功率(KW) Power	转速(rpm) Speed	处理量(L) Capacity	盘直径(mm) Disc Dia	升降行程(mm) Lifting Stroke	液压站功率(mm) Hydraulic power
RTFS-2.2	2.2	0-1440	50-150	150	600	0.75
RTFS-4	4	0-1440	50-200	200	600	0.75
RTFS-5.5	5.5	0-1440	80-250	200	800	0.75
RTFS-7.5	7.5	0-1440	100-300	250	800	0.75
RTFS-11	11	0-1440	100-400	250	800	0.75
RTFS-15	15	0-1440	150-500	300	800	0.75
RTFS-18.5	18.5	0-1440	200-800	300	1100	1.1
RTFS-22	22	0-1440	200-1000	300	1100	1.1
RTFS-30	30	0-1440	300-1500	350	1100	1.1
RTFS-37	37	0-1440	400-2000	400	1100	1.5
RTFS-45	45	0-1440	500-2500	450	1300	1.5
RTFS-55	55	0-1440	600-3000	500	1600	1.5
RTFS-75	75	0-960	800-4000	550	1800	2.2
RTFS-90	90	0-960	1000-5000	600	1800	2.2
RTFS-110	110	0-960	1000-6000	700	2100	3
RTFS-132	132	0-960	1500-8000	800	2300	3

GRINDING MEDIUM 研磨介质



钇稳定氧化锆珠 Yttria stabilized zirconia beads

钇稳定氧化锆珠：由于此类锆珠的氧化锆含量近似95%，所以又通常称作“95锆”或“纯氧化锆珠”。其使用稀土氧化钇做稳定剂，采用高白度、高细度的原材料确保不污染物料。

Yttria stabilized zirconia beads: The content of zirconia in the beads is approximately 95% and so it is usually called "95 Zirconium" or "Pure Zirconia Bead". With the rare earth yttrium oxide as stabilizer and the raw material of high whiteness and fineness, there will be no any pollution to the grinding material.



硅酸锆珠 Zirconium silicate beads

硅酸锆珠的氧化锆含量近似65%，所以又通常称作“65锆”。硅酸锆珠采用电解液中滴定成形、高温烧焙定相的先进工艺制成，珠内没有毛孔和空腔。中等的密度和硬度适合中低黏度浆料的研磨和分散，可匹配大部分的砂磨机，为通用型的研磨介质。其中小粒径的珠子被用作高档的抛光和去毛疵的喷丸。

The content of zirconia in the beads is approximately 65% and so it is usually called "65 Zirconium". With the advanced process of roll polishing and high temperature sintering, there will be no pore and void inside the beads. Because of medium density and hardness, it will be suitable for the grinding of materials with medium and low viscosity and it can be used in most of the grinding equipment. The small size beads are usually used as high-end ball blast for polishing and removal of flaws.

内容 Content	钇稳定氧化锆珠 Yttria stabilized zirconia beads	硅酸锆珠 Zirconium silicate beads
化学成分 Chemical composition	ZrO2 95% Y2O3 5%	ZrO2 65% SiO2 35%
真密度 Real density	6.05g/cm ³	4.0g/cm ³
堆积密度 Bulk density	3.75g/cm ³	2.5g/cm ³
吨磨耗率 Wear rate per ton	0.01kg/h	0.03kg/h
莫氏硬度 Moh's hardness	9	8



铈稳定氧化锆珠 Cerium stabilized zirconia beads

铈稳定氧化锆珠，因其含有稀土元素“铈”，所以是所有锆珠系列中比重最大的一种，适合某些特殊行业的应用，如：高比重，高粘度物料的研磨。

Cerium stabilized zirconia beads: Because it is with rare earth element "cerium", cerium stabilized zirconia beads are with biggest specific gravity in all zirconia beads series and it is very suitable for some special industries and grinding of materials with high specific gravity and high viscosity.



80氧化锆珠 80% Zirconia Balls

80锆珠的氧化锆含量近似80%，所以又通常称作“80锆”。此类锆珠由于性价比比较高，目前市场应用非常广泛。

80 Zirconia beads: The content of 80 zirconia in the beads is approximately 80% and so it is usually called "80 Zirconium". 80 zirconia beads have a very high cost performance and so it is very popular in the market.

内容 Content	铈稳定氧化锆珠 Cerium stabilized zirconia beads	80氧化锆珠 80% Zirconia Balls
化学成分 Chemical composition	ZrO2 80%, CeO2 20%	ZrO2 80% Al2O3 9% SiO2 11%
真密度 Real density	6.20g/cm ³	5.2g/cm ³
堆积密度 Bulk density	3.85g/cm ³	3.2g/cm ³
吨磨耗率 Wear rate per ton	0.01kg/h	0.02kg/h
莫氏硬度 Moh's hardness	9	9

EPC PROJECT EPC工程项目



The industries that we provide services for:
我们提供服务的行业与领域

农药 pesticide	染料 dyeing	颜料 pigment
墨水 Ink	涂料与油墨 coating paint and printing ink	汽车催化剂 automotive catalyst
阻燃剂 flame retardant	陶瓷与电子浆料 ceramics and electronic paste	钛白粉 titanium dioxide
滑石粉 talc	膨润土 bentonite	化妆品与生物医药 cosmetics and biology medicine
磁性材料 magnetic material	树脂与润滑油 resin and lubricating oil	橡塑助剂 rubber additives
造纸与纸张印刷 papermaking and paper printing	荧光增白剂与印染剂 fluorescent Brightener and printing-dyeing	氧化铝 alumina



为生产规模相对较小，产品种类丰富多变，工艺要求也较为复杂的行业提供自动化生产装置和项目建设服务。赛耳拥有完备的设计专业、相对规模的制造工厂和高素质的安装队伍，在石油化工、精细化工、涂料油墨、沥青、食品、农药、造纸化工等行业有丰富的经验。

Professional and Comprehensive Capability

Sail provides automatic production equipment and project construction services for industries, which are characterized by relatively small production size, a wide variety of products and complicated technical requirements. With a professional engineering team, sizable manufacturing factories, experienced installation team and long-time accumulated experience in petroleum chemical engineering, Fineness chemical engineering, coating and inks, asphalt, food, pesticide and paper-making industries, Sail has successfully developed from large-scaled chemical equipment supplier to a EPC contractor.

成本和工期控制

赛耳拥有“中国制造”的成本优势，但更重要的是，我们更合理的为您配置资源，周密计划，降低工作和综合成本。

Cost and construction time control

Sail enjoys the cost advantage of "made in china". Furthermore, with reasonable collocation of resources and careful planning, sail is devoting to help you save all unnecessary cost and shorten the construction period.

安全、节能与环保

我们为客户选择合理的设计方案和设备配置，准备恰当的措施，以及我们向客户提供的手册、技术资料 and 培训服务，确定您的工厂做到安全、节能和环保。

Safety, energy-saving and environment-friendly

We choose for clients suitable design programs and equipment allocation. provide appropriate measures and offer them manuals, technology data as well as training service to ensure safety, energy conservation and environmental protection for their industries.

为客户保密

我们为多家跨国化工集团在中国以及世界各地提供过设备采购承包、设备设计制造、工艺流程设计与改进以及包括了厂房建设在内的EPC总承包服务，与一些国际知名的工程公司和国有化工设计院也有许多成功的合作经验。这些项目的大致情况，您可以与我们的咨询工程师沟通而获得。但客户的工艺流程、配方和具体的设备配置等技术资料则始终是严格保密的。

Responsibility to keep project confidential

We have provided for many multinational chemical engineering enterprises the service of equipment procurement contract, equipment design manufacturing, technical process design and improvement as well as EPC contracting work that includes factory construction. Besides, we also have much successful corporation experience with some world-class engineering companies and nation-owned chemical engineering design institutes. You can obtain the general situation of these projects by communicating with our consulting engineers. But we will never expose such secrets as regards such technology data as clients technical process, formula and specific equipment allocation.



PROJECTS SHOW
案例欣赏

After-sale service
售后服务

