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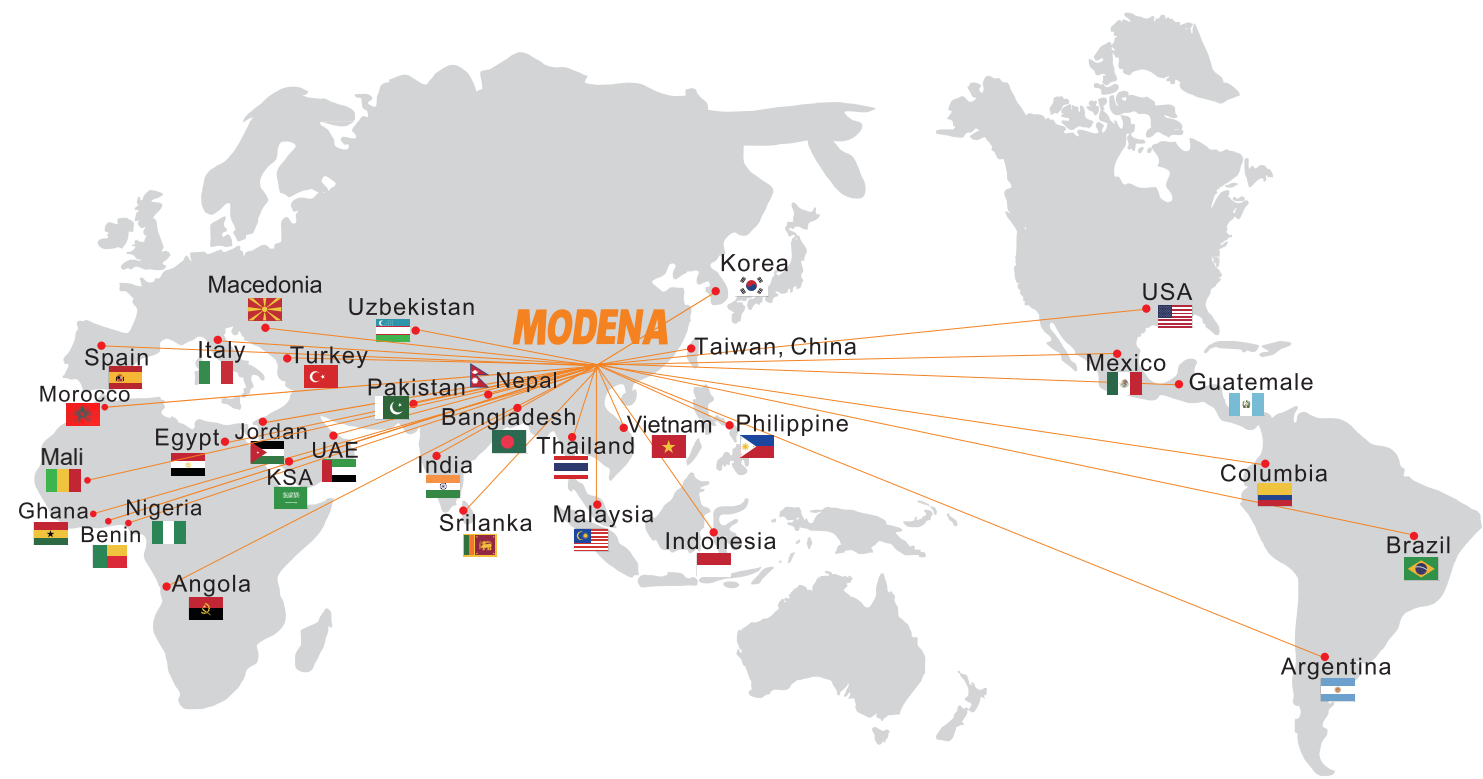
原料制备

RAW MATERIAL PREPARATION



来自世界各地的肯定

APPROVAL FROM ALL OVER THE WORLD



炉火纯青

Mastered Fire

Engineered Excellence

自成立以来，摩德娜已为海内外市场客户提供了过千条陶瓷生产线，均得到了客户的认可。数字还在继续增加中.....

More than 1,000 production lines have been successfully supplied by Modena in both domestic and overseas market and approved by the customers. And the counting still goes on



2003	2008	2010	2011	2012	2015	2017	2018	2020	2021	2022	2023	2024
佛山市摩德娜机械有限公司（广东摩德娜科技股份有限公司前身）注册成立。	3000平方米的新办公大楼投入使用。	佛山市摩德娜机械有限公司通过CE认证，同年获评定为“广东省高新技术企业”。	摩德娜全资子公司新兴县摩德娜机械有限公司（占地150亩）在广东省云浮市新兴县新城工业园奠基。	摩德娜MFS-305型大规格抛光砖用高效节能宽体窑获国家科学技术部评定为“国家重点新产品”。	摩德娜自主研发辊道窑新型节能系统RCH获得国家技术专利（ZL201510927025.0）。	摩德娜成功研发并推出新型电子空燃比（ADC）系统并获得国家专利（ZL201711461351.2）。极大地赋予辊道窑以更大的生产弹性和更高层次的自动化水平，并在能耗上达到了390kcal/kg（瓷质砖），为国际先进水平。	亚洲首条双层大规格岩板窑炉生产线在印度LIOLI工厂一次性投产成功，整线热工设备由摩德娜提供。	在中国岩板爆发的元年，摩德娜得到多家国内陶瓷头部企业（蒙娜丽莎，东鹏和金牌等）的青睐，供应多条INFINITY系列双层岩板窑炉和多层干燥器。截止2020年9月，亚洲区域的所有双层岩板窑炉（超过9条）均为摩德娜制造。	在后疫情时代，摩德娜整体营业收入创下历史记录。在出口市场尤为突出，3352个货柜的年度出货量冠绝行业，覆盖全球各大陶瓷产区，且以“全窑型”的全面数据回答了新时代的问题。	摩德娜与霍尼韦尔达成氢能应用战略合作，共同开发陶瓷行业低碳燃烧技术。此举不仅响应国家“双碳”目标，更推动窑炉清洁能源结构的革命性突破，为全球陶瓷产业低碳发展提供了创新解决方案。	摩德娜与新玻尔合作的10万m ² /天超大产量中板窑炉生产线成功实现规模化量产，通过创新的生产架构和优化的热工系统，提供了更高效率、更稳定的生产解决方案，创下全球窑炉单线产能新纪录！	摩德娜与赣锋锂业合作的碳酸锂项目成功启动，通过独特的连续煅烧方式实现矿物中锂元素的释放与转化，展现了摩德娜技术的跨界应用，标志着摩德娜向多元化热工装备服务商的转型迈出关键一步。
Foshan City Modena Machinery Co.,Ltd.(predecessor of Modena Technology Ltd.) was established.	New office building of 3,000 m2 put into operation.	Modena qualified for CE certification and ranked as "Provincial new hi-tech enterprise".	Wholly-owned subsidiary of Modena, Xinxing Modena Machinery Limited, laid its foundation in Xincheng Industrial Park in Xinxing Town, Yunfu City, Guang-dong Province, covers 100,000sqm area.	Modena's MFS-305 high-efficiency wide-body kiln for polished tiles was awarded as "National Key and New Product" by the Ministry of Science and Technology.	Modena's self-developed new type of energy-saving system RCH obtained National Patent (No. ZL201510927025.0).	Modena researched and developed its all-new Air/Gas Smart Control system (ADC) and obtained National Patent (No. ZL201711461351.2). The ADC system empowers the roller kiln with more productivity and higher level of automation, gas consumption reaches 390kcal/kg (for vitrified products) which is at the international leading level.	The very first Double-decker kiln for large-format sintered slab production line in Asia, supplied by Modena to LIOLI, was put into production successfully.	The year of 2020 is the year of Sintered Slab in China, Modena's INFINITY series thermal equipment (the Double-decker kilns and multilayer dryers) enjoyed the most popularity from the top brands (Monalisa, Dongpeng, Goldmedal etc.). Till September 2020, all the Double-decker kilns for sintered slab in Asia are provided by Modena (more than 9 lines).	In the post epidemic era, Modena set a historical record of annual turnover. It is particularly prominent in the overseas market. The annual shipment of 3,352 containers is the largest in the industry, covering all major ceramic zones in the world, and has answered the questionnaire of the new era with the a Full Slam of Kiln models.	Modena and Honeywell established a strategic partnership in hydrogen energy applications to jointly develop low-carbon combustion technologies for the ceramic industry. This initiative not only aligns with China's "Dual Carbon" goals but also drives a revolutionary breakthrough in the clean energy structure of kilns, providing innovative solutions for the global ceramic industry's low-carbon development.	Modena and XinBoer successfully achieved mass production with their groundbreaking 100,000 m ² /day porcelain tile kiln production line. Featuring an innovative production architecture and optimized thermal system, this project delivers unprecedented efficiency and production stability, setting a new world record for single-line kiln capacity in the ceramic industry.	Modena and Ganfeng Lithium successfully launched their lithium carbonate project. The innovative continuous calcination technology enables efficient lithium extraction and conversion, demonstrating Modena's cross-industry technological capabilities. This milestone marks a crucial step in Modena's transformation into a diversified thermal equipment solutions provider.

公司简介

COMPANY PROFILE



广东摩登娜科技股份有限公司（原佛山市摩登娜机械有限公司，以下简称“公司”）成立于2003年，是一家专业从事陶瓷机械设备研发、生产、销售和售后服务的高新技术企业。摩登娜是中国领先的陶瓷生产整厂设备供应商，以干燥和烧成设备为核心，同时配套施釉输送设备，带动整线成套陶瓷生产装备出口。产品除了销往全国中高端市场外，还远销印度、越南、美国、泰国、韩国、台湾地区、印尼、马来西亚、孟加拉国、巴基斯坦、土耳其、沙特阿拉伯、尼泊尔、约旦、加纳、阿联酋、埃及、墨西哥、哥伦比亚等国家和地区；为中国陶瓷机械，尤其是烧成设备在国际市场上赢得了良好的品牌和声誉，连续多年成为中国最大的窑炉和陶瓷整线生产装备出口企业。

Modena Technology Limited (formerly Foshan City Modena Machinery Co., Ltd.) was founded in 2003 as a high-tech enterprise specializing in the R&D, manufacturing, sales and after-sale service of ceramic machinery and equipment. Being a leading supplier of ceramic kilns in China, our main products include drying and firing equipment, with the glazing and conveying equipment as supporting products, both of which have promoted the exports of complete plants for ceramic manufacturing. Besides the domestic middle & high-end markets, Modena also exports its products to India, Vietnam, the U.S., Thailand, Taiwan, Indonesia, Malaysia, Bangladesh, Pakistan, Turkey, Saudi Arabia, Nepal, Jordan, Ghana, the U.A.E, Egypt, Mexico, Colombia, etc. Thus we have won a reputable brand name in the international market for Chinese ceramic machinery, especially the firing equipment. We are the largest Chinese enterprise exporting kilns and complete plants for years.

公司国际化的专业队伍、先进的核心技术、良好的运作管理和服务、高性价比的产品，在国际市场上具有很强的竞争能力。公司始终不忘企业社会中的责任，一直以节能减排、绿色环保为发展方向，通过节能减排技术推动行业发展和产业升级，努力推动中国陶机走向国际市场，成为世界一流的节能环保建材成套装备企业。

The international and professional team equipped with advanced core technology, combined with excellent operational management and service as well as the cost-effective products have made Modena highly competitive in the international market. Modena has been focusing on the social responsibility, being energy-saving and green-oriented. We drive the industrial development and evolution by our energy-saving technology and we are committed to promote Chinese ceramic machinery in the international markets. Modena has now become a first-class company supplying energy-saving building materials outfits.

目录

CONTENTS

连续式喂料系统 Continuous Feeding System	01
间歇式喂料机 Batch Feeding Machine	03
模块化连续球磨机 Modual Continuous Ball Mill	05
间歇式球磨机 Batch Ball Mill	07
釉料球磨机 Glaze Ball Mill	09
标准化喷雾干燥塔 Standardized Spray Dryer	11
皮带输送机 Belt Conveyor	13
泥浆搅拌机 Slurry Stirrer	15
料仓 Silo	16
连续球磨与间歇球磨用电量对比 Comparison of power consumption between continuous bamill and batch ball milling	17

连续式喂料系统

CONTINUOUS FEEDING SYSTEM



减少人工加料误差

Reduce manual feeding error

配料精度高

High proportioning accuracy

全自动工控机控制

Automatic control by industrial computer

报表统计功能

Report statistics

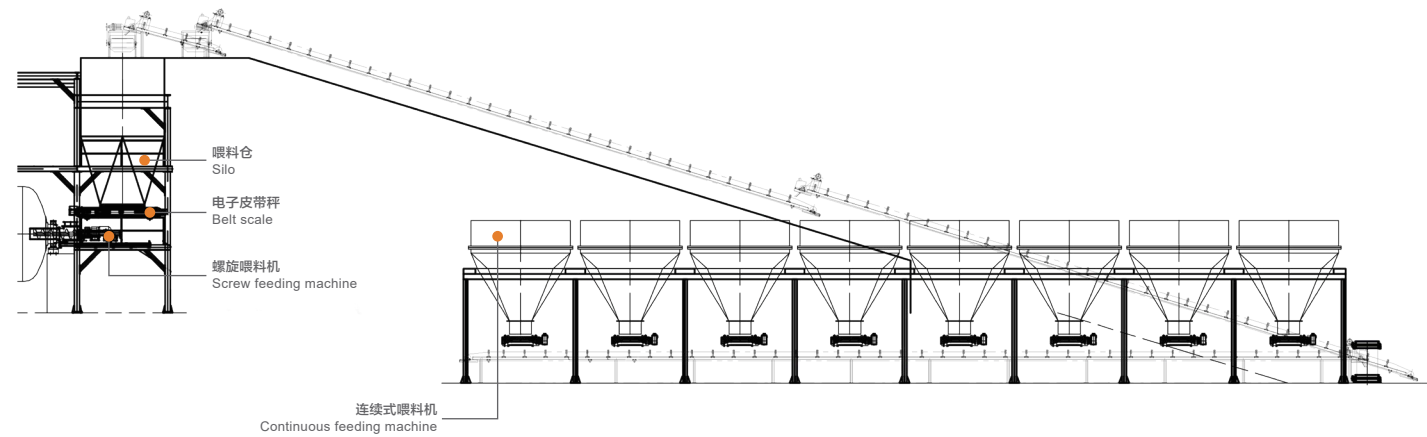
与连续球磨机连锁自动启停

Automatic on/off system
synced with continous ball mill

主要技术参数

MAIN TECHNICAL PARAMETER

序号 No.	名称 Description	规格 Type	数量 Qty.	功率 Power (KW)
1	原料仓 Raw material silo	20m³	8	-
2	电子皮带秤 Belt scale	W1*2.6M	8	2.2
3	皮带输送机 Belt conveyor (M)	W800mm	120(M)	2.2
4	混料仓 Mixed raw material silo	40m³	1	-
5	电子皮带秤 Belt scale	W1*4m	1	2.2
6	连续喂料系统电控系统 Feeding system control cabinet		1	-



间歇式喂料机

BATCH FEEDING MACHINE



多种结构，适合各种粘度及颗粒原料

A variety of structures suitable for a variety of viscosity and granular materials

卸荷板设计，减轻承压负载

Unloading plate design to reduce the pressure load

高品质大品牌传动部件

High quality driving parts from famous brand

减量法连续喂料，节省喂料时间

Different from the traditional method of continuous feeding, saving the feeding time

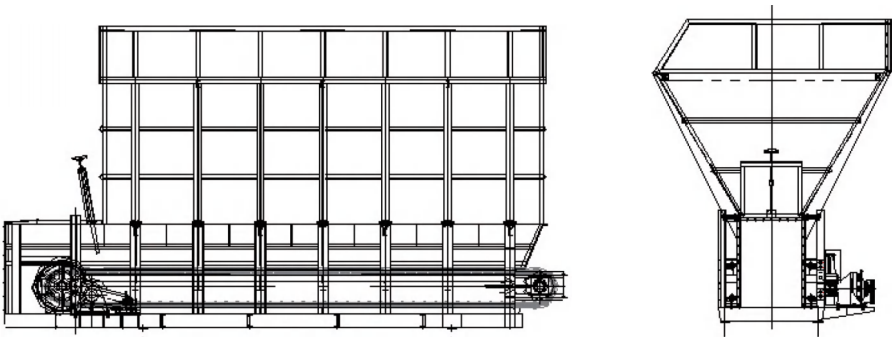
主要技术参数

MAIN TECHNICAL PARAMETER

型号 Type	规格 (m³) Type	主电机功率 (KW) Main motor power	破碎电机功率 (KW) Crusher motor power
FM60	60	5.5	7.5
FM50	50	5.5	7.5
FM40	40	4	5.5
FM30	30	3	5.5
FM20	20	3	4

外形尺寸参数 | DIMENSION PARMETERS

型号 Type	A	B	C	H	L	W
FM60	4,800	1,510	6,600	4,700	8,220	3,480
FM50	4,200	1,510	6,000	4,700	7,620	3,480
FM40	4,200	1,270	6,000	4,320	7,620	3,370
FM30	4,200	1,270	5,600	4,010	7,000	3,090
FM20	3,500	1,170	5,000	3,630	6,400	2,630



模块化连续球磨机

MODUAL CONTINUOUS BALL MILL



高效节能，节电10%–25%

High efficiency, 10%–25% power saving

浆料均匀性优于间歇球

More uniform slurry than batch ball mill



节省场地，更省人力

Save space, save more manpower

设计先进，全自动化

Advanced design, full automation operation

主要技术参数

MAIN TECHNICAL PARAMETER

型号 Type	MCM085	MCM108	MCM120	MCM128	MCM164	MCM180
容积 Volume (L)	2*42,300	2*54,400	2*61,000	3*42,300	3*54,400	3*61,000
驱动功率 Power (KW)	2*280	2*355	2*400	3*280	3*355	3*400
筒体转速 Rotational speed (r/min)	9.5-12.5	9-12	8.5-11	9.5-12.5	9-12	8.5-11
筒体重量 Cylinder net weight (kg)	2*27,000	2*31,000	2*36,000	3*27,000	3*31,000	3*36,000
橡胶内衬重量 Rubber lining (kg)	2*5,000	2*7,000	2*9,000	3*5,000	3*7,000	3*9,000
高铝球石重量 High-alumina ball (kg)	2*35,000	2*45,000	2*50,000	3*35,000	3*45,000	3*50,000
鹅卵石重量 Cobblestone weight (kg)	2*26,000	2*33,000	2*38,000	3*26,000	3*33,000	3*38,000

外形尺寸参数 | DIMENSION PARMETERS

型号 Type	模块数 Modules	容积 (L) Volume	A	B	C	D	E	F
MCM085	2	42, 300	3, 000	6, 000	2, 850	17, 800	4, 750	6, 200
MCM108	2	54, 400	3, 400	6, 000	3, 040	18, 100	4, 990	6, 500
MCM120	2	61, 000	3, 600	6, 000	3, 150	18, 340	5, 100	6, 750
MCM128	3	42, 300	3, 000	6, 000	2, 850	26, 700	4, 750	6, 200
MCM164	3	54, 400	3, 400	6, 000	3, 040	27, 100	4, 990	6, 500
MCM180	3	61, 000	3, 600	6, 000	3, 150	27, 800	5, 100	6, 750

间歇式球磨机

BATCH BALL MILL



优质焊接，优良制作

High quality welding, excellent production

筒体三点同步车削，同轴度高

3 points synchronized turnery for cylinder
high coaxiality

高品质大品牌传动部件

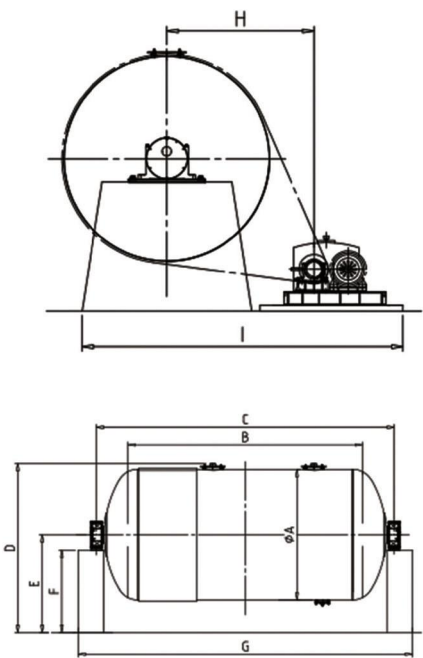
High quality driving parts from famous brand

主要技术参数

MAIN TECHNICAL PARAMETER

型号 Type	容积 Volume (L)	安装功率 (KW) Installed Power	筒体转速 (r/min) Rotational Speed	加料量 (KG) Load Capacity	重量 (KG) Weight
BM18000(8T)	18, 000	75/7.5	17	8, 000	16, 000
BM22000(10T)	22, 000	90/7.5	13	10, 000	20, 000
BM32000(15T)	32, 000	90/7.5	13	15, 000	26, 000
BM40000(20T)	40, 000	132/11	11	20, 000	27, 500
BM56000(30T)	56, 000	160/11	11	30, 000	32, 000
BM68000(40T)	68, 000	200/15(160/15)	11	40, 000	34, 000
BM98000(60T)	98, 000	315/22(250/15)	11	60, 000	38, 000

外形尺寸参数 | DIMENSION PARMETERS



型号 Type	A	B	C	D	E	F	G	H	I
BM18000	2, 700	3, 200	4, 400	3, 850	2, 312	2, 007	5, 100	1, 950	4, 350
BM22000	2, 800	3, 600	4, 820	3, 950	2, 370	2, 006	5, 470	2, 150	4, 475
BM32000	3, 200	4, 000	5, 130	4, 300	2, 490	1, 990	6, 790	2, 540	5, 640
BM40000	3, 200	5, 140	6, 375	4, 450	2, 600	2, 120	7, 335	2, 050	5, 450
BM56000	3, 400	6, 200	7, 600	4, 500	2, 700	2, 180	8, 600	2, 050	5, 650
BM68000	3, 600	6, 800	8, 550	4, 750	2, 700	2, 290	9, 570	2, 600	6, 000
BM98000	4, 000	7, 800	9, 530	5, 330	3, 080	2, 490	11, 100	2, 800	6, 340

釉料球磨机

GLAZE BALL MILL



主要技术参数

MAIN TECHNICAL PARAMETER

型号 Type	净空间体积 (L) Net Capacity	安装功率 (KW) Installed Power	加料量 (KG) Load Capacity	重量 (KG) Weight
BM500	500	4	200	1,800
BM2000	2,000	7.5	500	2,600
BM3000	3,000	15	1,000	3,500
BM5000	5,000	30	1,500	5,800
BM9000	9,000	37	3,000	7,500
BM12000	12,000	55	5,000	9,500

外形尺寸参数 | DIMENSION PARMETERS

型号 Type	A	B	C	D	E	F	G
BM500	950	800	1,200	1,378	760	1,378	2,070
BM2000	1,385	1,315	2,110	2,720	1,340	1,660	2,560
BM3000	1,500	1,700					
BM5000	2,100	1,800					
BM9000	2,700	2,100					
BM12000	3,200	2,180					

近乎零售后设备，装上即用

Carefree machinery

无需调试，最省心的釉料球磨机

Can be operated right after assembling

产量大，自动化程度高

More capacity, high automation



标准化喷雾干燥塔

STANDARDIZED SPRAY DRYER

合理的材料配置，经久耐用

Reasonable material distribution durable

模块化设计，方便现场拼装

Modular design to facilitate on-site assembly

能耗低至700-750大卡/公斤水

Energy consumption as low as
700-750 kcal / kg water

可调范围大，适合多种类颗粒级

More adjustable range suitable for a variety
of particle gradation

产量大，自动化程度高

More capacity, high automation

主要技术参数

MAIN TECHNICAL PARAMETER

型号 Type	蒸发水量 (kg) Waterevaporation	热容量 (kcal/h) Heat Consumption	喷枪数 (pcs) Lance	喷头数 (pcs) Nozzle	除尘器数 (pcs) Cyclone	柱塞泵数 (pcs) Piston Pump	电机功率 (KW) Fan Motor
SD500	500	450, 000	2	6	2	1	22
SD1000	1,000	850, 000	2	6	2	1	37
SD1500	1,500	1, 300, 000	3	9	2	1	45
SD2000	2,000	1, 700, 000	4	12	2	1	55
SD2500	2,500	2, 200, 000	4	12	2	1	75
SD3200	3,200	2, 800, 000	6	18	4	1	90
SD4000	4,000	3, 500, 000	8	24	4	2	90
SD5000	5,000	4, 500, 000	9	27	4	2	110
SD6000	6,000	5, 200, 000	11	33	4	2	132
SD7000	7,000	6, 500, 000	12	36	4	2	160
SD8000	8,000	7, 000, 000	14	42	4	2	185
SD9000	9,000	8, 200, 000	16	48	6	2	200
SD10000	10,000	9, 000, 000	17	51	6	2	220
SD12000	12,000	11, 000, 000	20	60	6	3	250
SD14000	14,000	12, 000, 000	21	63	6	3	280
SD16000	16,000	14, 000, 000	24	72	6	4	315
SD18000	18,000	15, 000, 000	27	81	6	4	350

型号 Type	φ (内径) Cylinder diameter	A (筒体高度) Cylinder height	B (下锥高度) Cone height	H (塔体高度) Total height	W (宽度) Width	L (长度) Length	塔体立柱 Column
SD500	4, 560	6, 200	4, 000	14, 000	8, 000	10, 500	φ168*6
SD1000	5, 600	6, 800	5, 400	17, 000	9, 000	11, 500	φ168*6
SD1500	6, 000	7, 000	6, 000	18, 000	9, 800	12, 500	φ194*6
SD2000	6, 800	7, 500	6, 150	19, 000	10, 000	13, 000	φ194*6
SD2500	6, 800	7, 500	6, 200	19, 600	10, 000	13, 500	φ194*6
SD3200	7, 120	8, 000	6, 900	21, 500	11, 500	14, 500	φ194*6
SD4000	7, 460	8, 500	6, 900	22, 000	11, 500	15, 000	φ219*6
SD5000	7, 600	8, 600	6, 900	22, 500	11, 500	15, 500	φ219*6
SD6000	8, 200	8, 750	7, 550	24, 000	13, 000	18, 500	φ219*6
SD7000	9, 000	8, 750	8, 270	24, 500	13, 000	19, 000	φ219*8
SD8000	9, 120	9, 350	8, 270	25, 000	13, 000	20, 000	φ219*8
SD9000	9, 880	9, 350	9, 000	25, 000	13, 000	20, 000	φ219*8
SD10000	9, 880	9, 360	9, 000	27, 500	13, 500	22, 000	φ219*8
SD12000	11, 400	9, 360	10, 700	27, 800	14, 500	22, 500	φ219*8
SD14000	11, 400	9, 360	10, 700	27, 800	14, 500	25, 500	φ219*8
SD16000	12, 390	10, 200	12, 000	30, 000	15, 600	25, 500	φ273*8
SD18000	12, 390	11, 500	12, 000	31, 000	15, 600	25, 500	φ273*8

皮带输送机

BELT CONVEYOR



模块化设计

Module design easy installation without welding

标准化包装运输

Standardized packaging for transportation



无焊接安装

Nowelding installation

高品质大品牌传动附件

High quality driving parts from famous brand

主要技术参数

MAIN TECHNICAL PARAMETER

型号 Type	长度 (M) Length	电机功率 (KW) Power	最大输送量 (T/H) Max.conveying Capacity
B1000	L≤6	4	40-45
	6 < L≤15	5.5	
	15 < L≤25	7.5	
	25 < L≤35	11	
	35 < L≤40	15	
B800	L≤6	3	35-40
	6 < L≤15	4	
	15 < L≤25	5.5	
	25 < L≤35	7.5	
	35 < L≤40	11	
B650	L≤6	2.2	30-35
	6 < L≤15	3	
	15 < L≤25	4	
	25 < L≤35	5.5	
	35 < L≤40	7.5	
B600	L≤6	1.5	25-30
	6 < L≤15	2.2	
	15 < L≤25	3	
	25 < L≤35	4	
	35 < L≤40	5.5	
B500	L≤6	1.5	20-25
	6 < L≤15	2.2	
	15 < L≤25	3	
	25 < L≤35	4	
	35 < L≤40	5.5	

泥浆搅拌机

SLURRY STIRRER

多种结构，适合各种粘度及颗粒原料

A variety of structures suitable for a variety of viscosity and granular materials

卸荷板设计，减轻承压负载

Unloading plate design to reduce the pressure load

减量法连续喂料，节省喂料时间

Different from the traditional method of continuous feeding, saving the feeding time

高品质大品牌传动部件

High quality driving parts from famous brand



规格 Type	转速 Rotate Speed(r/min)	功率 Power(kW)	浆池容积 Volume(m³)	浆池尺寸 Tank Dimension(mm)
SS1000-15-2.5	25	1.5	2.5	Φ1500×1500
SS1600-15-5	25	2.2	5	Φ2100×1500
SS1500-24-6	25	2.2	6	Φ1800×2440
SS1500-24-7	25	2.2	7	Φ2000×2440
SS1600-24-8	25	3	8	Φ2100×2440
SS1800-30-10	25	4	10	Φ2200×3000
SS2500-30-20	13	5.5	20	Φ3000×3000
SS3000-30-30	13	5.5	30	Φ3600×3000
SS4500-35-60	8	7.5	60	Φ5000×3500
SS5000-36-100	8	7.5	100	Φ6000×3600
SS5500-35-110	8	7.5	110	Φ6500×3500
SS7500-36-200	5	11	200	Φ8000×4000
SS11000-60-660	5	18.5	660	Φ12000×6000

料仓

SILO



该设备用于粉料储存、陈腐、均化。主要包括：粉料仓、上下料位检测装置、手动或气动闸阀。

The equipment used for powder storage, stale, homogenization. Including: silo, upper and lower position detection device, manual or pneumatic valve.

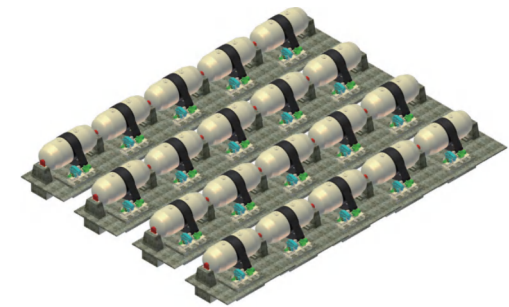
连续球磨与间歇球磨用电量对比

COMPARISON OF POWER CONSUMPTION BETWEEN CONTINUOUS BALL MILL AND BATCH BALL MILLING

20台间歇球磨机 20 batch ball mills

日产1200吨粉料使用60吨间歇球磨机球磨的参数
60T batch ball mills parameter for daily production 1200T powder

间歇球磨机数量（台） Quantity (set)	球磨时间（小时） Milling time (hour)	每台每小时用电量（度） Electricity for each set (KW·h)	日用电量（度） Daily electricity (KW·h)	产量（吨） Production (Ton)
20	15	184	55200	1200

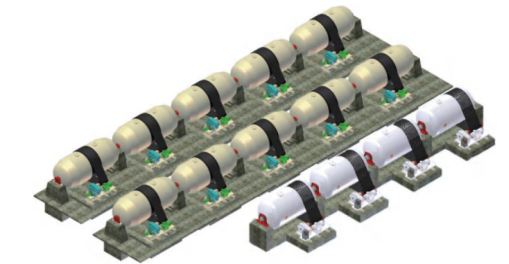


10台间歇球磨机+一套四组连续球 10 batch ball mills + 4 continuous ball mills

日产1200吨粉料使用10台60吨间歇球磨机加1组4台连续球磨机球磨的参数
60T batch ball mills and continuous ball mills parameter for daily production 1200T powder

间歇球磨机数量（台） Quantity (set)	球磨时间（小时） Milling time (hour)	每台每小时用电量（度） Electricity for each set (KW·h)	日用电量（度） Daily electricity (KW·h)	产量（吨） Production (Ton)
10	8.5*2	184*10	31280	1200
连续球磨机数量（台） Quantity (set)	球磨时间（小时） Milling time (hour)	每台每小时用电量（度） Electricity for each set (KW·h)	日用电量（度） Daily electricity (KW·h)	
4	24	190*4	18240	
		合计 Total	49520	

节电率 / Power saving rate= (55200-49520) / 55200*100%=10.3%



连续球磨机方案

CONTINUOUS MILL SCHEME

采用10台60T间歇球磨机 + 4台连续磨机生产方案
Production plan for 10 sets of 60T batch ball mills and 4 sets of continuous ball mills

先用10台60T间歇球磨机球磨8.5个小时，再用4台连续磨机球磨24小时。
10台60T间歇球磨机+4台连续磨机,24小时3班次泥浆流量:403+355+313=1071m3
24小时泥浆产量:1071*1.68=1799.28吨
24小时干粉产量:1799.28*0.67=1205.5176吨
间歇球磨机球磨时间上料：1.5小时+放浆1.5小时+球磨8.5小时=11.5小时
24小时内每台间歇球磨机球磨次数：24/11.5≈2次
间歇球磨机的球磨时间为:10台间歇球*2班次*8.5小时/班次=170小时
60T球磨机工作每小时平均电量为：184度
10台间歇球磨机用电量：184度*170小时=31280度
单台连续球磨机及其辅助设备工作每小时平均用电量为：190度
4台连续磨机用电量:190*4*24=18240度
总用电量：31280+18240=49520度
每吨粉用电量:49520/1205.5176≈41度

1. Use 10 sets of 60T batch ball mills to mill 8.5 hours first. Then use 4 sets of continuous ball mills to mill 24 hours.
2. 24 hours slip production: 1071*1.68=1799.28 Tons
24 hours powder production: 1799.28*0.67=1205.5176 Tons
3. Milling time of batch ball mill: feeding 1.5 hours+slipping 1.5 hours+milling 8.5 hours=11.6hours
4. Time of each batch ball mill in 24 hours: 24/11.5=2
5. Milling time of intermittent ball mill(10 sets): 10 sets*2 shifts*8.5 hours/shift=170 hours
6. Average electricity for 60T ball mill: 184 kW · h
Electricity for 10 sets of batch ball mills: 184 kW.h*170 hours=31280 kW · h
7. Average electricity for each continuous ball mill and its auxiliary equipment: 190 kw · h
Electricity for 4 sets of continuous ball mills 190*4*24=18240 kW · h
8. Total electricity: 31280+18240=49520 kW · h
9. Electricity for each ton powder: 49520/1205.5176341 kW · h

间歇球磨机方案

BATCH BALL MILL SCHEME

完全采用20台60T间歇球磨机
Production plan for 60T batch ball mills(20sets)

间歇球磨机球磨周期:15小时
生产同样干粉需要间歇球磨机数量：1205.5176/60≈20台 · 次
60T球磨机工作每小时平均电量为：184度
全部用间歇球磨机的球磨时间为：20台间歇球*1班次*15小时/班次=300小时
20台间歇球磨机用电量：184*300=55200度
每吨粉用电量：55200/1205.5176≈45.8度

1. Milling time of batch ball mill: 15 hours
2. Quantity of ball mill for producing powder: 1205.5176/60=20sets
3. Electricity for each set: 184kW · h
4. Milling time: 20 sets*1 shift*15hours/shift=300 hours
5. Electricity for 20 sets of lot batc ball mill: 184*300=55200 kw. h
6. Electricity for each ton powder: 55200/1205.5176=45.8 kw.h

每天采用10台60T间歇球磨机+4台连续磨机方案生产比
全部采用60T间歇球磨机方案生产节省的电量:55200-49520=5680度
每度电:0.6元
一天节省：0.6*5680=3408元
一年节省（按330天生产计算）：3408*330=1,124,640元
Adopt 10 sets of 60T batch ball mills and 4 sets of continuous ball mills
It would save electricity, comparing with 20 sets of batch 60T ball mill
55200-49520=5680kW·h
kW.h: 0.6 CNY/kW. h in China
Per day save: 0.6*5680=3408 CNY
Per year save(base on 330 days production): 3408*330=1,124,640 CNY