



MTW 系列欧版T型磨粉机

MTW Series Europeanism T-shaped Pulveriser

品质与文明之光闪耀世界

The Light Of Quality

And Civilization Shines The World!



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MTW 系列欧版T型磨粉机 产品概述

Product Overview

MTW系列欧版T形磨粉机，是建立在我公司专家在长期磨机研发经验基础上，并对传统磨粉机的结构性能加以分析，对9500多名磨机使用客户的建议加以综合考证。最终经过数十位研发人员的潜心研究，创新设计出来的具有世界先进水平的新一代磨粉机。本系列机型有着许多传统磨粉机无法比拟的优点，如采用锥齿轮整体传动，内部吸油润滑系统，弧形风道等多项世界先进技术，同时拥有多项自主专利技术产权。此系列机型已达到国际先进技术水平。

MTW series Europeanism T-shaped pulveriser is establish on the basis of our company experts' long-term R & D experience, structural performance analyses for traditional pulveriser and synthesis verification for proposal of more than 9500 pulveriser customers. Finally new generation pulveriser with advanced international level is innovatively designed out through research of tens of R & D personnel with great concentration. This series machine is provided with many merits unmatched by traditional pulveriser, such as cone gear whole transmission, inner oil absorption lubrication system, arc air flue and multinomial international advanced technologies, simultaneously is provided with multinomial autonomous patent technology property right. This series machine already comes up to international advanced technology level.

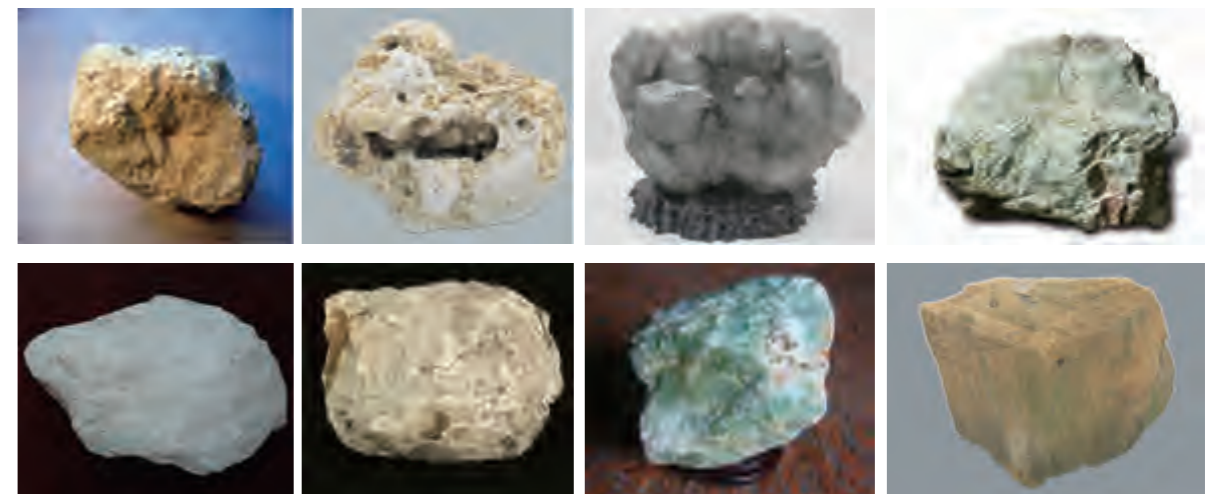


适应范围 Adaptation Range



本系列的磨粉机适用于冶金、建材、化工、矿山等矿产品物料的磨粉加工，可粉磨石英、长石、方解石、滑石、重晶石、萤石、稀土、大理石、陶瓷、铝矾土、锰矿、铁矿、铜矿、磷矿石、白云石、花岗岩、玄武岩、石膏、石墨、碳化硅、保温材料等莫氏硬度在九级以下，湿度在6%以下的各种非易燃易爆矿产物料。

This series pulveriser, which is applicable for pulverizing minerals in metallurgy, building material, chemical engineering, mine and other industries, can pulverize quartz, feldspar, calcite, talcum, barite, fluorite, rare earth, marble, ceramic, bauxite, manganese ore, iron ore, copper ore phosphorus ore, dolomite, granite, basalt, gypsum, graphite, carborundum, heat insulating material and all kinds of non-flammability and non-explosion minerals with Moths hardness below class 9 and humidity below 6%.



整机结构及工作过程介绍

Introduction to Complete Machine Structure and Working Process

结构特点：该系列磨粉机整机为立式结构，占地面积小，成套性强，而且主机传动装置采用密闭齿轮箱，传动平稳。磨机的重要部件均采用优质钢材制造，因此整机耐用可靠。磨粉机电器系统采用集中控制，选型先进合理，自动化程度高，振动给料机体积小重量轻，易于调节并且省电。

Structural feature: This series pulveriser is of vertical structure, small in floor space and strong in complete set. Furthermore sealing gear case is adopted for main unit gearing and smooth in transmission. The key components are manufactured by quality steel, so complete machine is durable and reliable. The centralized control is adopted for electric system of pulveriser. It is advanced and reasonable in lectotype and high in degree of automation. The vibrating feeder is small in volume, light in weight, easy to be regulated and saves electricity.



- 1—颚破 Jaw Crusher
- 2—斗式提升机 Bucket Elevator
- 3—料仓 Stock Bin
- 4—电磁振动给料机 Electro-vibrating Feeder
- 5—选粉机 Classifier
- 6—管道 Pipeline
- 7—旋风集粉器 Whirlwind Powder Collector
- 8—风机 Fan
- 9—布袋除尘器 Bag-type Dust Collector

整机工作过程

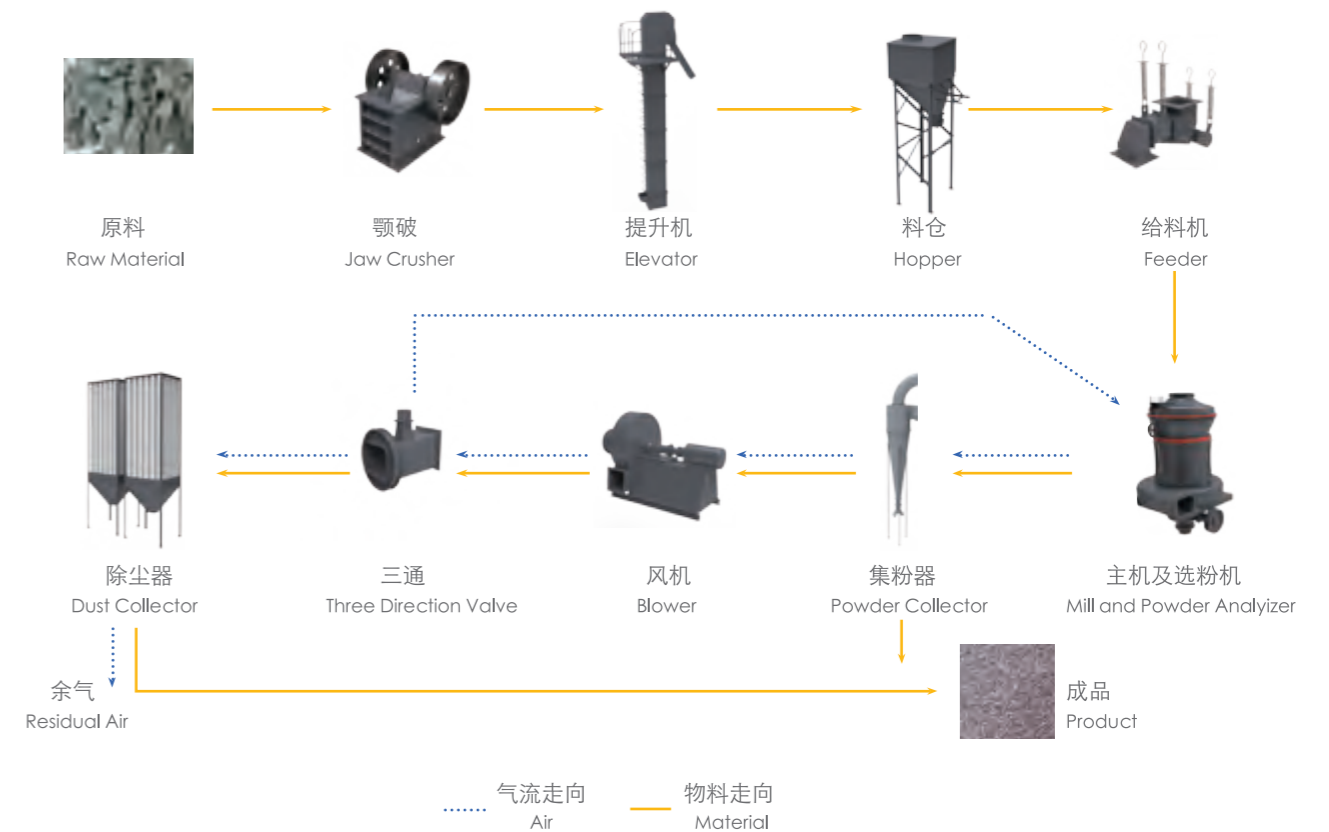
Working process

首先大块物料先送至颚式破碎机，经由颚式破碎机将大物料破碎到所需粒度。

The bulk material is firstly sent to the jaw crusher and crushed into required granularity.

经过颚式破碎机进行破碎后的物料经由提升机送至储料斗，再经由振动给料机将料均匀定量的连续的送至主机内进行研磨。

Post-crushing material through jaw crusher is sent to the storage hopper via bucket elevator and then sent uniformly, quantitatively, consecutively by vibrating feeder to main unit for pulverizing.



经由给料机送入主机的物料经主机磨粉，产生的粉子随风机气流上升，经由选粉机进行分级，符合细度要求的粉子随气流经管道进入旋风集粉器中。

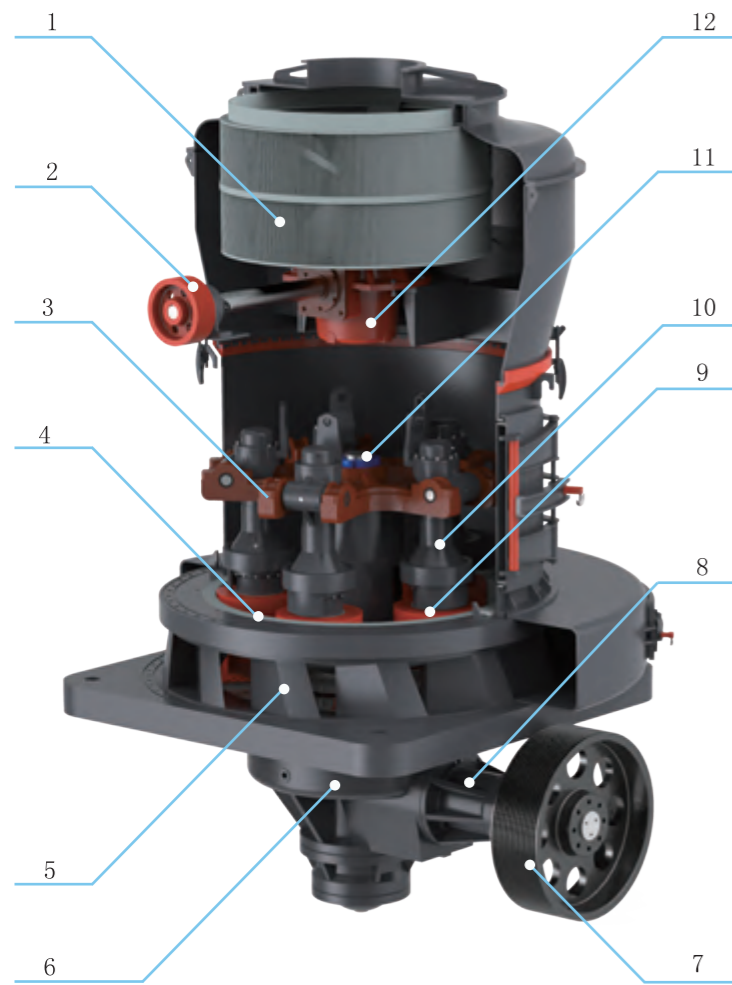
Materials fed into main unit by way of feeding machine are pulverized by main unit. The generant powders, which rise with airflow of fan, are graded by powder concentrator. Powders conforming to fineness requirement enter into whirlwind powder collector with airflow via duct.

粉粒进入旋风集粉器进行分离收集，经出粉阀排出即为成品粒子。此时气流由旋风集粉器上端回风管吸入离心引风机循环流动。

The powder particles are fed into whirlwind powder collector for separation and collection. What are discharged out through powder valve are finished product particles. At this time airflow is sucked by air return duct at upper end of whirlwind powder collector into centrifugal induced draft fan for circulation flow.

主机结构工作过程介绍

Introduction to Main Unit Structure and Working Process



标配：叶片式选粉机
Standard:vane type classifier
选配：笼式选粉机
Optional:cage type classifier

- | | | | |
|----------|------------------------|----------|-------------------------|
| 1.选粉机叶片 | Classifier blade | 7.主机皮带机 | Main unit belt pulley |
| 2.选粉机皮带轮 | Classifier belt pulley | 8.传动轴部分 | Transmission shaft part |
| 3.磨辊吊架 | Gringing roller hanger | 9.磨辊 | Gringing roller |
| 4.磨环 | Gringing ring | 10.磨辊部分 | Grinding roller part |
| 5.机座 | Engine base | 11.铰座 | Hinged support |
| 6.齿轮箱 | Gear case | 12.选粉机油池 | Classifier oil sump |

--- 主机工作过程 ---

Main unit's working process

主机工作过程中,磨辊装置不仅围绕中心轴回转,还围绕着磨环公转,磨辊本身因摩擦作用而自转,这样工作的好处是不仅能对物料进行充分的研磨,而且使磨辊的周围均匀磨损,提高了磨辊的使用寿命。

In main unit's working process, grinding roller device not only performs gyration by surrounding the central axis, but also performs revolution by surrounding the grinding ring. The grinding roller itself self-rotates by rubbing effect, the merit of which is that it can not only fully pulverize material, but also ensure uniform wear around grinding roller, increasing service life of grinding roller.

磨辊吊架下,装有铲刀,与磨辊同时转动,在这过程中铲刀把物料抛起并喂入磨辊磨环之间,形成垫料层,该料层受磨辊产生的向外的离心力(即磨辊与磨环挤压物料的力)将物料碾碎,由此达到制粉目的。

Perching knife, which is installed under grinding roller hanger, rotates with grinding roller at the same time. In this process, the perching knife throws up materials and feed them into grinding ring of grinding roller to form a padding layer. This padding layer is pulverized through outward centrifugal force generated by grinding roller (namely extrusion force between grinding roller and grinding ring) for the purpose of pulverization.



技术优势

Technical advantage

MTW欧版T形磨粉机与传统磨粉机相比有着许多独特的优点:

Compared with Traditional one, MTW Europeanism T-shaped pulveriser is provided with many unique merits:



锥齿轮整体传动—结构紧凑、安装方便、降低能耗

Cone gear whole transmission – compact conformation, convenient installation, reducing dissipation of energy

在传动方式上,传统磨粉机需要另配减速机、通过联轴器传动主轴;安装难度大,并且容易产生噪音。MTW磨粉机采用的是锥齿轮整体传动,结构更加紧凑,安装调节更为方便,并且降低了传动过程中的能量损耗,使得本产品能够以更低的电机功率提供更多的产量。

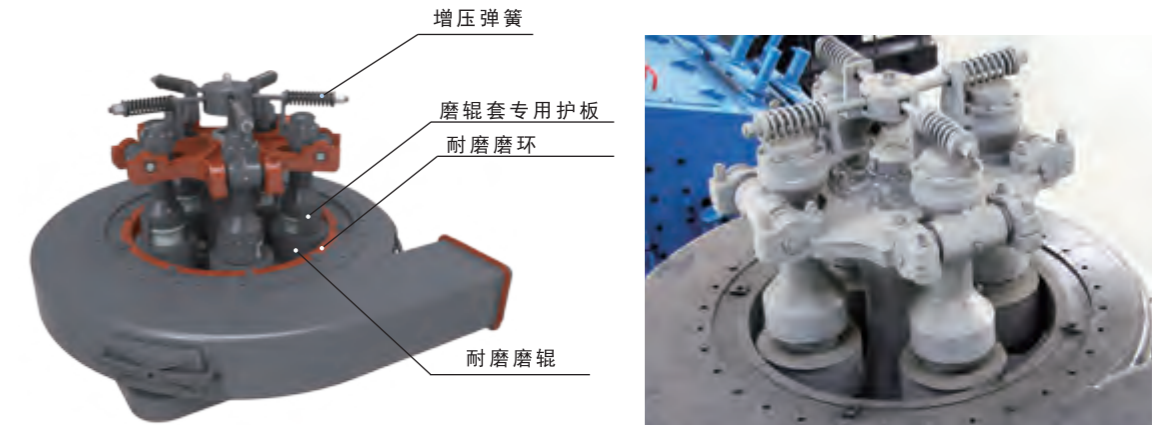
On driving mode, traditional pulveriser needs additionally matching with a reductor to drive the shaft through coupling, which is large in installation difficulty and easy to generate noise. The cone gear whole transmission is adopted for MTW pulveriser, which ensures that this product is even more compact in structure, even more convenient in installation and adjustment, reduces energy loss in driving process and can provide even more yield with even lower motor power.

主机心脏磨辊磨环的优化设计—弹簧增压、高耐磨性能

Optimization design for grinding roller grinding ring of spring pressurization, high-wearing feature

针对本系列MTW欧版磨核心部件—磨辊磨环,本公司从耐磨性能以及材料上进行了反复试验,最终采用强耐磨材料,对其中碳、锰等的含量进行严格检测控制。并使用弹簧进行增压,提高磨粉效率及性能。

Specific to this series MTW Europeanism pulveriser's core part - grinding roller grinding ring, this company performs repeated test on wear-resisting property and material, finally adopts strong wear resistant material, strictly detects and controls its carbon, manganese and other contents, and uses spring to conduct pressurization so as to improve pulverizing efficiency and performance.



高效能选粉机的设计—精准快速选粉

High-performance powder concentrator design – accurate and quick selection of powder

本系列的MTW磨粉机的选粉机经过了精心设计,通过进行流体力学分析等手段对选粉机叶片进行了优化设计,使选粉的精度与速度有了进一步的提高。

The powder concentrator in this series MTW pulveriser is well-designed. The design of classifier blades is optimized through hydromechanics analyses and others mean to ensure that powder selection precision and velocity are further improved.



独特的耐磨铲刀的设计—分体式、便于维护、耐磨材料、寿命长

Unique wear proof perching knife design – fission type, convenient for maintenance, wear resistant material, long life

传统的铲刀为整体式设计，刃部一旦磨损即需整体更换；并且其铲刀为平面型，铲起的物料会堆积在一个层面上，使磨辊磨环中部损失严重。此系列的MTW系列欧式梯形磨铲刀，刃部采用高耐磨合金材料，且分离设计，更换时只需更换刀刃部分；铲刀本身为曲面型铲刀，可将物料导向立面，使磨辊磨环上、中、下部都能粉磨，提高效率。

Traditional perching knife is integrally designed. Once knife-edge is worn, it needs to be replaced integrally; because perching knife is of plane type, materials scooped up would stack on a bed plane, which makes loss in the middle of grinding roller grinding ring severe. The knife-edge of this series MTW Europeanism trapezia grinder adopts high wear-resistant alloy material and is designed separately. During replacement, it only needs to replace knife-edge; The perching knife itself, which is of curved surface type, can guide materials to the vertical face to ensure that all of upper, middle and lower parts can perform grinding to improve efficiency.



曲面可分离刀刃
Knife edge with separable curved surfaces



弧形风道设计
Arc air duct design

整体外观的设计—结构紧凑、美观大方

Integral appearance design – compact conformation, elegant appearance

欧版磨机不仅内部采用了诸多先进结构，而且外观也采用优美的弧形结构设计，使整台机器显得更加秀外慧中。

Not only are a good many of advanced structures adopted inside Europeanism grinding machine, but also graceful arc structural design is adopted for appearance to ensure complete machine looks much more beautiful and intelligent.

弧形风道设计—降低阻力，不易积料

Arc air duct design – reducing resistance, not easy for material deposit

传统磨机中的磨粉机风道，均为直板型风道。这种结构存在着气流冲击风道板产生阻力，气流分子间相互碰撞的能量损失大，易产生涡流导致风道堵塞等缺点。

All the pulveriser air flues in traditional grinding machine are of straight plate type. Such structure features that airflow impacting air flue plate will generate resistance; intermolecular collision of airflow causes large energy loss; airflow is easy to generate eddying to clog air flue and other demerits.

MTW系列欧式梯形磨所采用风道为曲面型风道，切向气流进口顺滑，阻力小，内部出口方向有利于物料的分散，不容易堵料。

The curved surface air flue is adopted for MTW series Europeanism trapezia grinder. The tangential airflow inlet is smooth with small resistance. The inner outlet direction is favorable to dispersal of materials and not easy to plug.

蜗壳的设计—降低能量损失，节能高效

Volute design – reducing energy loss, energy conservation, high efficiency

传统磨机的进风蜗壳观察门内部门板内面向外凸出，与进风蜗壳内面不在一个平面上，易产生涡流效应，增加系统能耗。MTW系列欧式梯形磨采用内部门板内面与进风蜗壳内面在同一曲面上，能有效的避免涡流效应，降低了能量损失，有报告称整体可以节能20%以上。

The inner face for inner door sheet of air intake volute observation door in traditional grinding machine protrudes outward, is not on the same plane as inner face of air intake volute and is easy to generate eddying effect, increasing system energy dissipation. The inner face of inner door sheet adopted by MTW series Europeanism trapezia grinder is on the same curved surface as inner face of air intake volute, can effectively avoid eddying effect and reduce energy loss. It is reported that it can integrally save more than 20% energy.

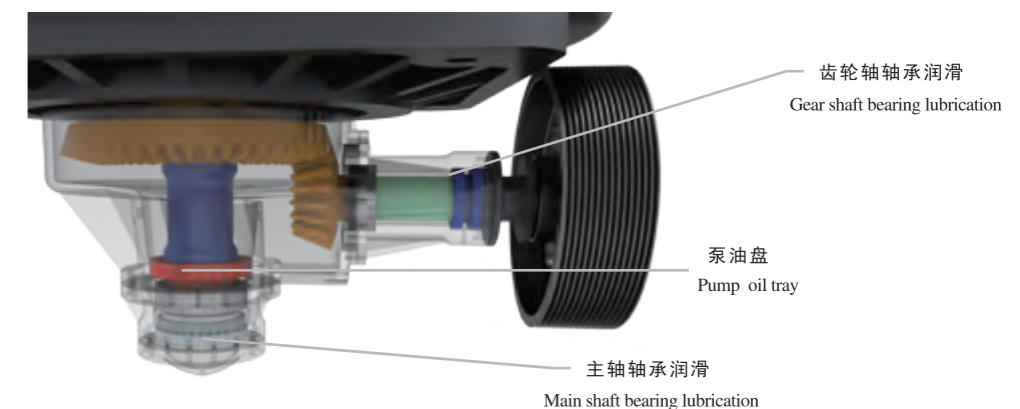


内部润滑系统—内置油泵、循环润滑

Internal lubrication system – built-in oil pump, circulating lubrication

传统的磨机采用的润滑方式为脂润滑，润滑阻力大、温升高、轴承寿命短。本系列磨机采用的是内部油泵进行润滑，轻松实现主轴轴承和齿轮轴承的润滑，无需另配油泵或润滑站，增加了机器的寿命，据对客户的回访本系列机型与传统磨机相比维护费用能够降低30%左右。

What is adopted for traditional grinding machine is the grease lubrication mode, with large lubrication resistance, high temperature rise and short bearing life. What is adopted for this series grinding machine is lubrication conducted by inner oil pump. It easily realizes lubrication for main shaft bearing and gear shaft bearing. It need not otherwise match with oil pump or lubrication station, increasing grinding machine life. According to return visit to customer, this series machine can reduce around 30% maintenance cost, compared with traditional one.



主要技术参数

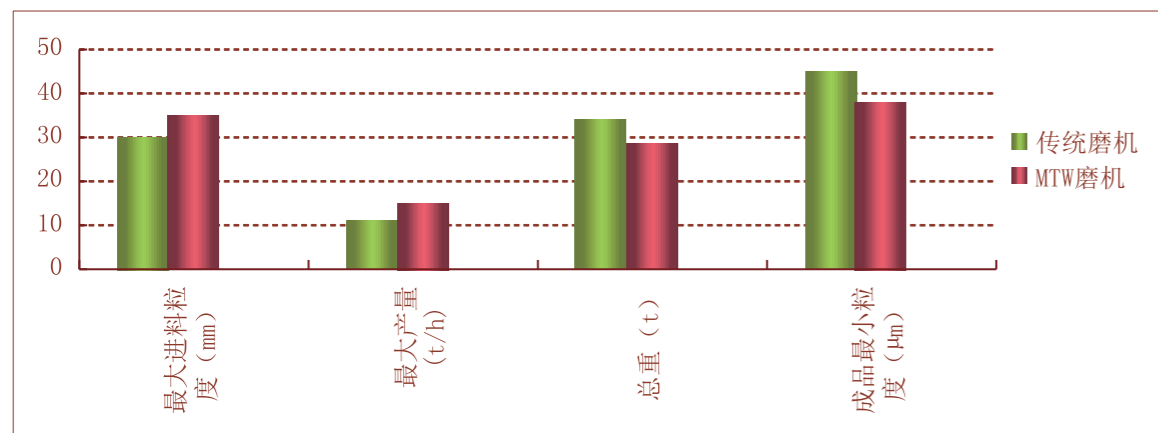
Main technical details

参数 名称 Name	产品	MTW110	MTW138	MTW175	MTW215
磨辊数量 Roller number(pcs)		4	4	5	5
磨环内径 Inner diameter of roller(mm)		φ 1100	φ 1380	φ 1750	φ 2150
主机转速 speed (RPM)		120	96	75	65
进料最大尺寸 Max.feed size (mm)		<30	<35	<40	<50
成品粒度 Final size (mm)		1.6-0.045 最细可达0.038 Fineness can reach to 0.038	1.6-0.045 最细可达0.038 Fineness can reach to 0.038	1.6-0.045 最细可达0.038 Fineness can reach to 0.038	1.6-0.075 最细可达0.038 Fineness can reach to 0.038
产量 Capacity (t/h)		3.5~10	6.5~15	13~20	30~45
外型尺寸 Overall dimension (mm)		8625×7933×8642	10920×9470×10227	12275×9555×9916	14730×10860×10341

注：生产能力按中等硬度的石灰石测定。同时又受物料的粒度、含水量，及物料的性质等因素影响。
NOTE: Capacity is according to the medium hard limestone. The size, humidity level and characters of materials will influence the capacity.

下面是MTW磨机与传统磨机在主机功率为90KW时具体的比较:

The following is specific comparison between MTW grinding machine and traditional one when main unit power is 90KW:



MTW磨机	最大进料颗粒	总重
MTW grinding machine	Maximal feedstock granule	Gross weight
传统磨机	最大产量	成品最小粒
Traditional grinding machine	Maximum yield	Finished product minimum granule

主要技术参数

Main technical details

型号 Model	项目 Item	单位 Unit	规格、技术数据 Specs and technical data				
			MTW110	MTW138	MTW175	MTW215	
主机电动机 Main unit motor	型号 Model		Y280M-6	Y315M-6	Y355M2-8	Y3-400-8	
	功率 Power	千瓦 kw	55	90	160	280	
	转速 Rotation speed	转/分 Rpm	980	990	740	740	
选粉机调速电动机 Speed regulating motor of classifier	型号 Model		YVP160M-6	YVP200L-6	YVP250M-6	YVP280M-4	
	功率 Power	千瓦 kw	7.5	22	37	90	
	转速 Rotation speed	转/分 Rpm	1440	1470	1470	1470	
离心引风机电动机 Motor of centrifugal induced draft fan	型号 Model		Y250M-4	Y315S-4	Y315L2-4	Y355L2-4	
	功率 Power	千瓦 kw	55	110	200	315	
	转速 Rotation speed	转/分 Rpm	1480	1480	1480	1480	
辅机部分 Auxiliaries	斗提 Mills Bucket Elevator model	斗提型号	TH200×8.13m	TH-315×9.55m	TH-315×10.55m	TB-315×12.43m	
		电机型号 Motor model	Y100L2-4	Y112M-4	Y112M-4	Y160M-4	
		电机功率 Motor power	千瓦 kw	3	4	4	11
		电机转速 Motor speed	转/分 Rpm	1430	1440	1440	1440
	颚破 Jaw crusher model	颚破型号	PE250×400	PE250×750	PE250×750	PC1010	
		电机型号 Motor model	Y180L-6	Y200L2-6	Y200L2-6	Y315L1-6	
		电机功率 Motor power	千瓦 kw	15	22	22	110
	给料机 Feeder	型号 Model	GZ2F	GZ3F	GZ4F	GZ5F	
		功率 Power	千瓦 kw	0.15	0.2	0.45	0.65

注：表中产量指粉磨石灰石，通筛率80%。
Note: The output in the form refers to grind limestone to 80% pass.

客户现场

Customer Site

