Features of Micro Powder Grinding Mill
微粉磨性能及特点》

•高效

在成品细度及电动机功率相同的情况下，比气流磨、搅拌磨、球磨机的产量高一倍以上；

•High Efficiency

Under the same finished final size and the same motor power, the capacity of micro powder grinding mill is twice as much as jet mill, mixing grinder and ball mill.

•易损件使用寿命长

磨辊、磨环采用特殊材料锻制而成，从而使耐用程度大大提高。在物料及成品细度相同的情况下，比冲击式破碎机与涡轮粉碎机的易损件使用寿命长2-3倍,一般可达一年以上;加工碳酸钙、方解石时，使用寿命可达2-5年；

•Long lifecycle of spare parts

The ring and roller are forged by special material with high utilization. Under the same grinding material and finish special size, the lifecycle of spare parts is about one year, which is 2-3 times
longer than impact mill or turbo mill. Furthermore, the lifetime can reach 2-5 years for grinding calcite carbonate.

•安全可靠性高

因磨腔内无滚动轴承及螺钉，所以不存在轴承及其密封件易损的问题，或因螺丝松动而毁坏机器的问题；

•High safety and reliability

As no rolling bearings or screws in grinding cavity, there are no problems caused by bolts shedding or rapid wear of bearings and seal components.

•产品细度高

产品细度一次性可达到D97≤5μm；

•High fineness and flexible adjustment

The final fineness of the grinding materials can be adjusted between 325 meshes and 3000 meshes, and the product fineness can reach D97≤5μm.

•对环境污染小

环保脉冲除尘器和消声器的使用大大减轻了粉尘和噪音对周边环境的污染。

•Environment-friendly

The application of pulse deduster and muffler greatly alleviates dust pollution and noise.

Model and Technical Data
规格和技术参数表》

型 号 Model	HGM8021	HGM9024	HGM10027	HGM10036
平均工作直径mm(Ring Diameter)	800	900	1000	1000
环道数量/层 Ring Number/ pcs	3	3	3	4
磨辊数量/个Roller Number/ pcs	21	24	27	36
主轴转速Main Shaft Speed /r.p.min	230	200	180	180
入料粒度 Input Size /mm	≤20	≤20	≤20	≤20
成品粒度范围Finished Size /μm	5-47	5-47	5-47	5-47
成品产量 Capacity t/h	0.4-4.5	0.4-5.5	0.6-6.5	0.7 -7.5
安装外形长x宽x高Outlet Size L×W×H /m	13.9x4x6.2	14.7x4.8x7.2	18x4.6x8.6	18x4.6x8.6
整机容量Power /Kw	145	192	263	263

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Working Principle of Micro Powder Grinding Mill

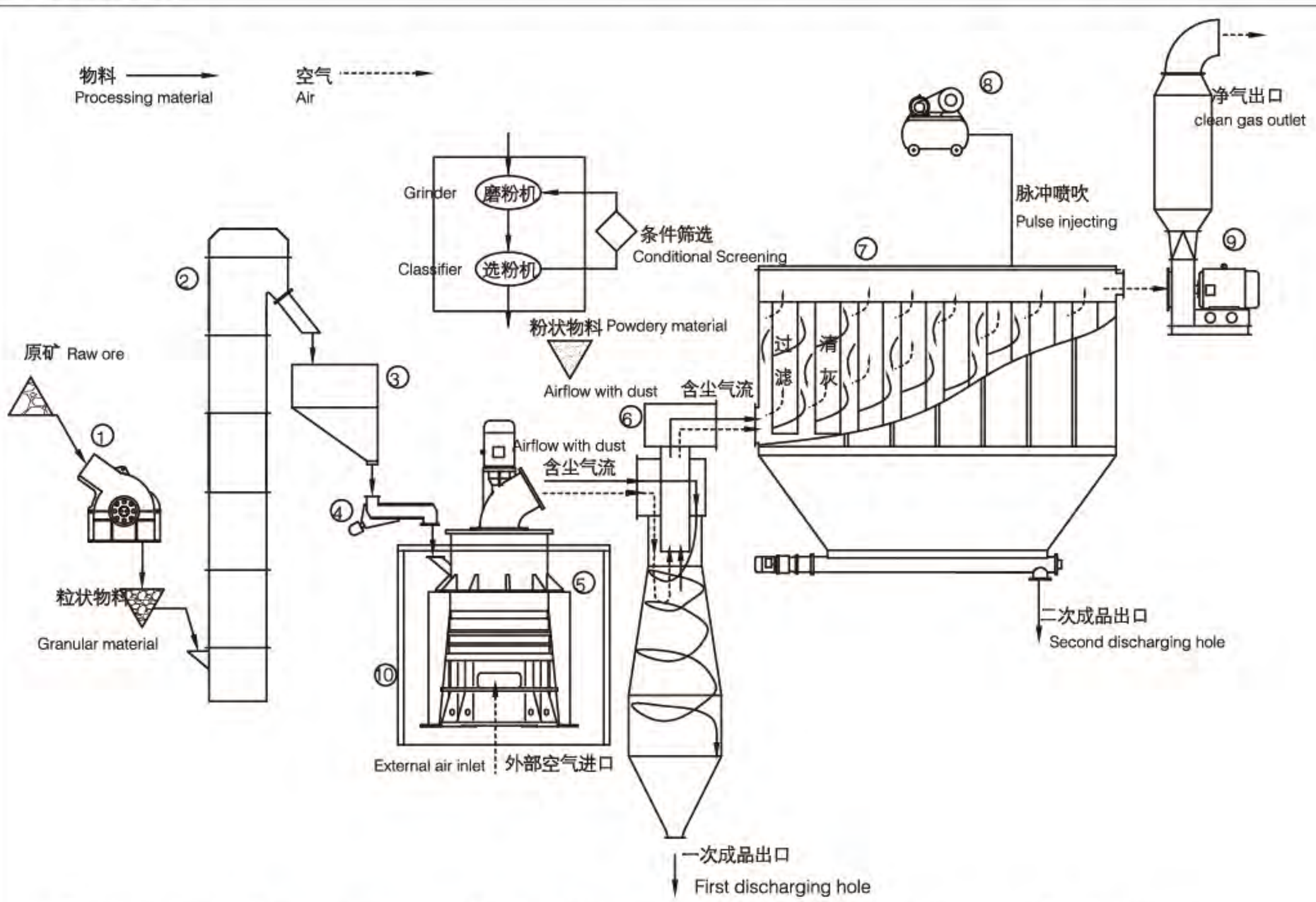
《微粉磨工作原理

HGM series micro powder grinding mill mainly consist of main unit, classifier, powder collector, dust cleaner, blower, muffler, sound-proof room, crusher, bucket elevator, storage hopper, and vibrating feeder.

After crushed by hammer crusher, the large materials become small ones and are sent to storage hopper by elevator, and then evenly sent to the upper distribution plate of the turnplate by vibrating feeder and sloping feeding pipe.

When the grinding mill is at work, all the grinding rollers are rolling in the ring, and the materials are driven to the edge of the turnplate by the centrifugal force and fall down into the grinding chambers where the materials are repeatedly pressed, crushed and grinded by the rollers.

The high-pressure air blower constantly inhales air within the grinding mill and, in turn, the airflow with crushed materials are brought to the classifier whose high-speed impeller will screen the airflow: the unqualified particle size will fall and return to the mill for being reground while the qualified particle size mixed with air will go into the cyclone powder collector. Most of the qualified powders will fall and exit from the discharging valve at the bottom; a small proportion of the fine powders, with airflow, moves to the dust cleaner, and clings to the surface of the filter bags. At the same time, the fine powders clinging to the surface fall down by the sudden vibration of the filter bags, which is caused by the instantly ejected high-pressure gas controlled by the pulse valve. The materials from the above two lots are sent by the conveyor at the bottom to get finished powders packed. In addition, filtered clean air will be emitted from the air outlet of muffler in the end.



HGM微粉磨物料加工工艺流程图
Flow diagram of HGM micro powder mill processing

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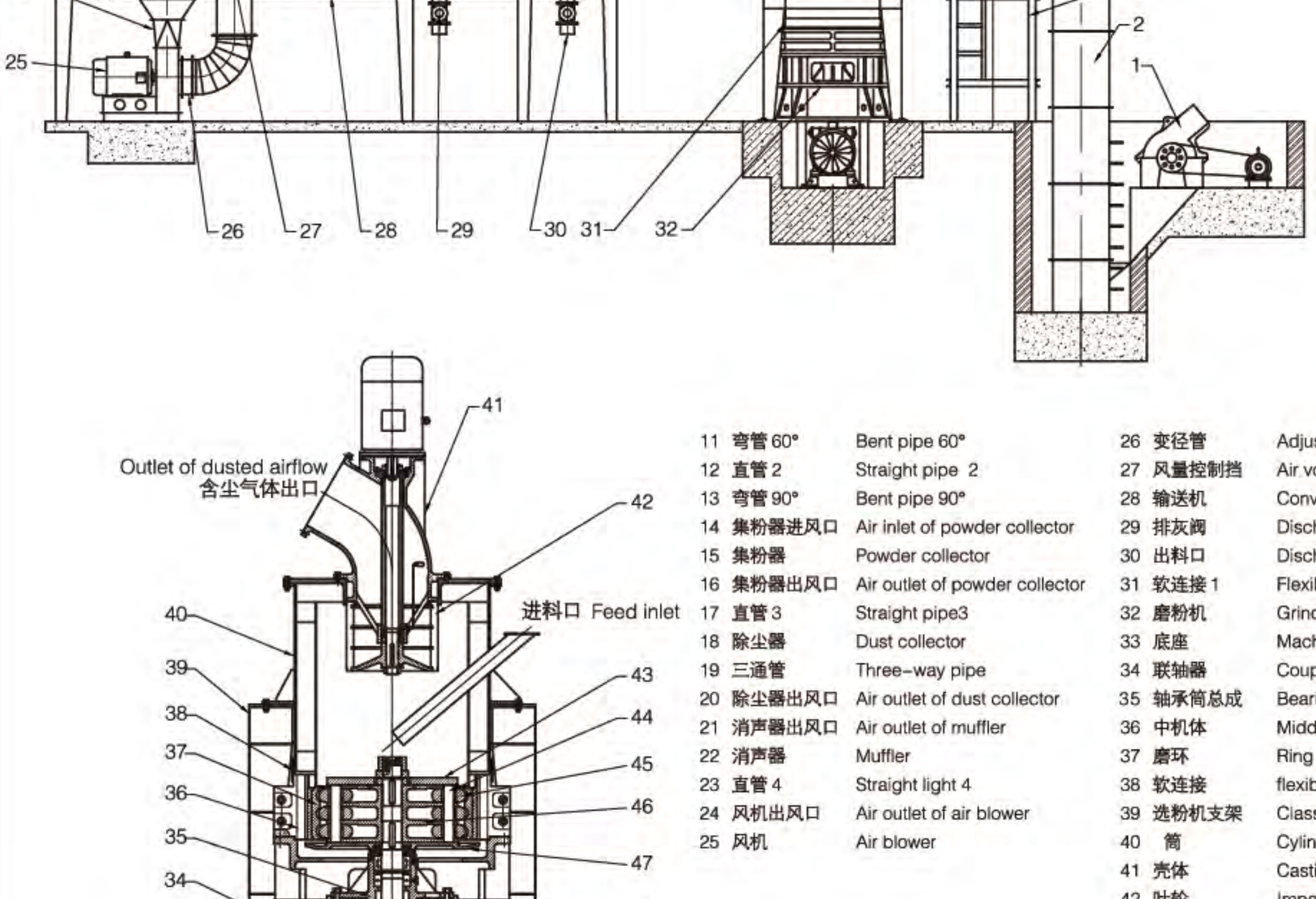
Components of Micro Powder Grinding Mill

微粉磨组成部分》



1	破碎机	Hammer crusher	26	变径管	Adjustable duct
2	提升机	Elevator	27	风量控制挡	Air volume controller
3	料仓支架	Hopper stand	28	输送机	Conveyor
4	下料口	Feeding inlet	29	排灰阀	Discharging valve
5	给料机	Vibrating feeder	30	出料口	Discharge outlet
6	软连接2	Flexible connection2	31	软连接 1	Flexible connection1
7	给料机吊架	Feeder hanger	32	磨粉机	Grinding Mill main unit
8	料斗	Hopper	33	底座	Machine base
9	选粉机	Classifier	34	联轴器	Coupling
10	直管 1	Straight pipe1	35	轴承筒总成	Bearing assembly
11	弯管 60°	Bent pipe 60°	36	中机体	Middle body
12	直管 2	Straight pipe 2	37	磨环	Ring
13	弯管 90°	Bent pipe 90°	38	软连接	flexible connection
14	集粉器进风口	Air inlet of powder collector	39	选粉机支架	Classifier stand
15	集粉器	Powder collector	40	筒	Cylinder
16	集粉器出风口	Air outlet of powder collector	41	壳体	Casting
17	直管 3	Straight pipe3	42	叶轮	Impeller
18	除尘器	Dust collector	43	上散料盘	Upper distribution plate
19	三通管	Three-way pipe	44	辊销	Shaft pin
20	除尘器出风口	Air outlet of dust collector	45	磨辊	Roller
21	消声器出风口	Air outlet of muffler	46	转盘	Turnplate
22	消声器	Muffler	47	下散料盘	Lower Distribution plate
23	直管 4	Straight light 4	48	减速机总成	Reducer
24	风机出风口	Air outlet of air blower			
25	风机	Air blower			

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