

Mini Planetary Ball Mill



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Overview

Vertical planetary ball mill is a necessary device of high-tech materials mixing, fine grinding, sample making, new product development and small batch production. Koreaprocess ball mill owns small volume, high efficiency, low noise and functional features which is a ideal equipment for R&D institution, university, enterprises laboratory to get samples (each experiment can get four samples at the same time). It gets powder samples under the vacuum state when equipped with vacuum ball mill tank.



Fashion design

3D curve shape design,
elegance and fashion

Exquisite workmanship

Both ends
Delicate and precise



Special drive gear

Specia gear with low noise, lower about 15-20db compared with common gear. Stable rotation speed



Working Principle

KH series planetary ball mill has four ball grinding tanks installed on one turntable. When the turntable rotates, the tank axis makes planetary movements, the balls and samples inside the tanks are impacted strongly in high speed movement, and samples are eventually ground into powder. A variety of different materials can be ground by the mill with dry or wet method. Minimum granularity of ground powder can be as small as 0.1 μ m.



Feature

- Stable revolving speed of the gear transmission ensures the consistency and repeatability of the experiment.
- Planetary movement principle is adopted in the machine, which has high speed, large energy, high efficiency, small Granularity.
- Four powder samples from different sizes and different materials can be produced at one time.
- The machine is controlled by frequency converter; you may choose ideal rotating speed according to expected experimental result. The converter is equipped with device of under voltage and over-current to protect the motor.
- The planetary ball mill has functions of timing power off, self-timing forward and reversal rotating. You may choose freely any operation modes of one-way direction, alternation, succession, and timing according to experimental needs so as to improve efficiency of grinding.
- Technical features of Tencan Ball Mill: Low center of gravity, stable performance, compact structure, easy operation, reliable safety, lower noise, small loss.
- Safety switch is installed on the machine to prevent safety accident if the safety cover is opened while machine is running.

Application Cases of Planetary Ball Mill



Before grinding



After grinding

Material : Active carbon
Material weight : 50g
Mill Jar & Balls : Corundum mill jars and zirconia balls
Grinding method : Dry grinding
Rotation speed : 560rpm
Applied equipment : Planetary ball mill Model No.XQM-0.4A
Total volume : 1000mlx4=4000ml
Grinding time : 2hours
Granularity : 2 μ m



Before grinding



After grinding

Material : Kaolin
Material weight : 500g
Mill Jar & Balls : PTFE
Grinding method : Dry grinding
Rotation speed : 450rpm
Total volume : 1Lx4=4L
Spent time : 1hour 20 minutes
Feed size : 2mm
Granularity of output : 100 μ m



Material : Green tea (dry)
Material weight : 0.25kg
Mill Jar & Balls : Stainless steel
Grinding method : Dry grinding
Applied equipment : Planetary ball mill Model No.XQM-2
Total volume : 0.5Lx4=2L
Spent time : 1hour

Application Technical parameter

Drive Mode	Gear drive and belt drive
Working Mode	Two or four grinding jars working together
Max Load Volume (Material+Balls)	No more than 2/3 of mill jar volume
Feeding Size	Soil & crispy materials≤10mm,Other materials≤3mm
Output Granularity	Minimum up to 0.1um (different materials and grinding process will be different)
Rotation Speed Ratio(Revolution/Rotation)	1/2
Max.Continuous Operating Time	72hours
Materials of Jar	stainless steel,agate,nylon,corundum, zirconia,etc

Technical Parameter Table





Parameters of Mini Vertical Planetary Ball Mil								
Model No	Power (KW)	Voltage	Dimension (mm)	Revolution Speed (rpm)	Rotation Speed (rpm)	Total Timing (min)	Noise ≤db	Alternating Run Time of Forward & Reversal Rotation(min)
KM-0.4	0.25	220V-60Hz	530*300*340	45-435	90-870	1-9999	58db	1-999

Measurement of Mini Vertical Planetary Mill Ball				
Model No	Power(KW)	Speed Control Mode	Net Weight(kg)	Dimensions(mm)
KM-0.4	0.25	Frequency Control	29	500X300X340

Available Size of Mill Jar for Mini Vertical Planetary Ball Mill				
Model No	Specifications	Volume of each matched pot	Quantity	Remarks
KM-0.4	0.4L	50-100ML	4pcs	Can be matched with 50ml vacuum mill jar

Accessory

We provide all kinds of mill pots in any matched size, which are made from following materials of agate, Alumina corundum ceramics, zirconia ceramics, silicon nitride ceramics, carborundum ceramics, stainless steel, high wear resistant steel, manganese steel, nylon, PU, cemented carbide, crystal glass, and etc.

Material	Volume of Mill Jar	Diameter of Mill Ball	
Stainless Steel	50ml,100ml,250ml,500ml,1L,1.5L,2L,2.5L,3L,4L	1-30mm	
Stainless Steel (for vacuum)	50ml,100ml,250ml,500ml,1L,1.5L,2L,3L,4L,5L	1-30mm	
Zirconia	50ml,100ml,250ml,500ml,1L,1.5L,2L,3L,4L	1-30mm	
Alumina	50ml,100ml,250ml,500ml,1L,1.5L,2L,3L	1-50mm	
Tungsten Carbide	50ml,100ml,250ml,500ml,1L,1.5L	3-10mm	
Agate	50ml,100ml,150ml,250ml,300ml,400ml,500ml,1L,1.5L,2L	6-35mm	
Nylon	50ml,100ml,250ml,500ml,1L,1.5L,2L,2.5L,3L,4L	\	
PU	50ml,100ml,250ml,500ml,1L,1.5L,2L,2.5L,3L,4L	\	
PTFE	50ml,100ml,250ml,500ml,1L,1.5L,2L,2.5L,3L,4L	\	