Planetary Ball Mill

Working Principle

A Planetary Ball Mill consists of at least one grinding Vessel witch is arranged eccentrically on a sun Wheel / Rotating table.

When the sun wheel rotates about its axis, the vessel follows planetary motion i.e. it rotates about it's own axis as well as about the axis of sun wheel. The direction of rotation of vessel is opposite to that of the sun wheel, this imparts very high energy to the balls to collide one another during high speed movements causing very fast grinding and mixing of material(s) in the vessels to a very high fineness up to 1 Micron depending upon the physical characteristics of material, number and size of balls, time and speed selection.

Model: PBM4-500

Technical Specifications

1	***Type of Ball Mill***	:	Planetary Ball Mill with Four Jars
2	***Planetary Ball Mill with Four jar Capacity 500 ml***	:	Planetary ball mill with Four bowl holder with 500 ml Capacity possible to use of various material jars & balls such as Tungsten Carbide, Zirconium oxide and Stainless Steel, Agate, Hardened Steel etc.
3	***Feed Material Size & Type***	:	Suitable for soft, hard, brittle, fibrous & rocky material either dry or wet with feed particle size less than 10 mm
4	***Brief Description***	:	The offered Planetary Ball Mill shall be consisting of four Grinding Vessel which are arranged eccentrically on a sun Disc. When the Sun disc rotates about its axis, the vessel follows planetary motion about the center of sun disc, the direction of rotation of vessel is opposite to that of the sun wheel, this imparts very high energy to the balls to collide one another during high speed moments causing very fast grinding and mixing of material(s) in the vessels to a very high fineness up to 01 micron depending on the physical characteristics of material, number & size of balls and the time and speed selection.
5	***Final fineness***	:	Less than 1 µm for normal and for colloidal grinding < 0.1 µm
6	***Speed Ratio with reference to Main disc & Jar***	:	1: -2.3
7	***Wheel Rotation Speed***	:	Having rotational speed of main disk from 50-400 rpm
8	***Jar Speed***	:	From 115 to 920 rpm
9	***Effective Diameter***	:	≥ 240 mm
10	***Operating Centrifugal acceleration***	:	≥ 30 g
11	***Setting Grinding Time***	:	Digital Type, 00:00:01 – 99:59:59 with interval and pause facility.
12	***Grinding Conditions***	:	Both dry and wet grinding facility available
13	***Operation Time***	:	Machine can run uninterruptedly for more than 100 hrs. with appropriate Offtime in periodic interval.
14	***Bowl Set / Jar & Lid Material***	:	Hardened Steel
15	***Ball Material***	:	Hardened Steel
16	***Variability Control***	:	Microprocessor controlled, continuous
17	***Table Speed Indicator***	:	Digital
18	***Parameter's Display***	:	Digital, Touch screen
19	***Forward & Reverse Selection***	:	Yes
20	***Motor & Drive***	:	Standard Make-2HP, AC-3 Phase 415 V, 1415 r.p.m.; with Microprocesor based VFD.
21	***Power Supply***	:	440 V, 50 Hz
22	***Safety Features***	:	Door switch for machine. Current overload safety for motor protection.
23	***Type of Mounting***	:	Capable of operating on a platform (Floor mountable)

Note: Supplied equipment may vary from the image(s) shown here.

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