PSG PLANETARY BALL MILL PBM 4

SALIENT FEATURES

PSG Planetary ball mill is ideally suitable for industries and educational institutions, wherever the highest degree of fineness is required. Apart from the classical mixing and size reduction processes, the mills also meet all the technical requirements for colloidal grinding. The extreme high centrifugal forces of the planetary ball mill results in very high pulverization energy and hence the time required for grinding is comparatively less.

Nano particle dimensions and other physical properties can be modified by adjusting the process parameters such as grinding medium, ball ratio, ball material, motor rpm, etc., Thus, the machine would greatly help the researchers and students to learn the nano particle synthesis in bulk using top down approach. Customized set up can also be supplied.

Suitable for the Production of variety of Nanoparticles

A versatile and cost effective machine to design and produce nanoparticles with ease

PLANETARY BALL MILL PBM 4

In the planetary ball mill, grinding bowls rotate on their own axis while simultaneously rotating through an arc around the central axis. The grinding bowls and material are thus subjected to centrifugal forces which constantly change in direction and intensity resulting in efficient, fast grinding processes. The grinding balls rotate against the inside wall of the bowl until under specific conditions they break away from this. After being thrown across the grinding bowl, the grinding material and the balls are impacted against the opposite wall. The energy thus created by impact is many times higher than for traditional ball mills. This results in excellent grinding performance and considerably shorter grinding times.

The planetary ball mill meet and exceed all requirements for fast and reproducible grinding down to the nano range. They are used for the most demanding tasks, from routine sample processing to colloidal grinding and mechanical alloying for different application areas such as geology & mineralogy, ceramics, medicine & pharmacology research and material technology etc.,

TECHNICAL DATA

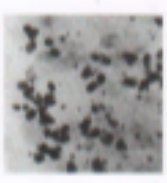
Working principle	Impact force, Friction
Grinding process	Dry or Wet

VIALS

Number of Vials working at a time	2 or 4
Vial volume	280 ml
Vial material	Stainless Steel, Tungsten carbide
Media ball	Stainless Steel, Tungsten carbide
Maximum input in each vial	Material and Media should be less than 2/3 of the volume
Input size	Particle size should be smaller than 1000 μm
Output size	20 nm, 20 μm
Rotate speed	20 - 400 rpm

Speed ratio revolution rotation	1:2
Speed adjustment	Frequency Control
Working voltage	230 V
Power	1.5 kW
Maximum working time (continuous)	5 hrs
Weight of the machine (Approx.)	400 kg
Floor space required (LxBxH)	800 x 700 x 1200 mm

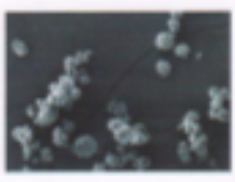
Customized set up can also be supplied



Ball milled nano graphite

yttria stabilized zirconia

Lanthanum ferrite



yttria stabilized zirconia/PVA

Developed by

Manufactured by PSG Industrial Institute, a manufacturer with 7 decades of tradition. This equipment is robustly built. Ideally suitable for industries and educational institutions. After sales service of PSG is efficient and prompt.

Manufactured by

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