

PLANETARY BALL MILL

PBM 1-4

Planetary ball mill **PBM 1-4** is designed for fine grinding of materials of different hardness in batch mode. The grinding can be performed dry or wet. The mill is produced by VIBROTECHNIK LLC according to the design documentation and under the supervision of its developer Vladimir Kochnev.

In a planetary ball mill, grinding occurs due to impact destruction during the motion of balls, as well as abrasion - simultaneous compression and shear deformation. The size of the crushed material particles depends on the running time of the mill, the physical properties of the material, the volume of material loaded, as well as the volume of balls loaded. Recommended volume of material loaded in one bowl: 15 - 45 cm³, recommended volume of balls loaded in one bowl: 50 - 130 cm³.

Planetary ball mill **PBM 1-4** can be used as a mixer for the preparation of emulsions, suspensions and slips.



Planetary Ball Mill **PBM 1-4**

INDUSTRIES



Mining



Metallurgical



Construction



Chemical



Pharmaceutical



Food

CHARACTERISTICS

Maximum initial material grain size, mm	3
Axis arrangement	vertical
Mohs hardness of grinded material, up to	8
Loading volume of one bowl, cm ³	15-45
Number of bowls	4
Full volume of one bowl, cm ³	230
Centrifugal acceleration, g	up to 30
Grinding time to obtain a particle size of 90% <1 μm, min	30
Electric motor power, kW	1,5
50 Hz supply voltage, V	220
Overall dimensions (Length x Width x Height) (mm)	695x460x545
Weight, kg	130
Bowls material – tool steel	5140H



VIBROTECHNIK

Russian avant-garde equipment for milling

www.vibrotechnik.com

PLANETARY BALL MILL

APPLICATIONS

Ferroalloys, ores, granite, marble, limestone, coal, corundum, coke, slags, terra silicea, zirconium dioxide, silica gel, glass, automotive catalyst, aluminum oxide.

ADVANTAGES

- Effective grinding of the sample due to the planetary-centrifugal acceleration of grinding balls and crushed material up to 30g;
- Fixing of the bowls with a quick-release device;
- 220 V supply voltage;
- Built-in control panel with timer;
- Simultaneous grinding of four samples up to 45 cm³ each, total sample volume up to 180 cm³;
- Possibility of grinding material in four bowls or in two opposite ones;
- Toothed belt drive ensures high reliability and low noise;
- The end switch excludes start-up of the mill with the cover open.

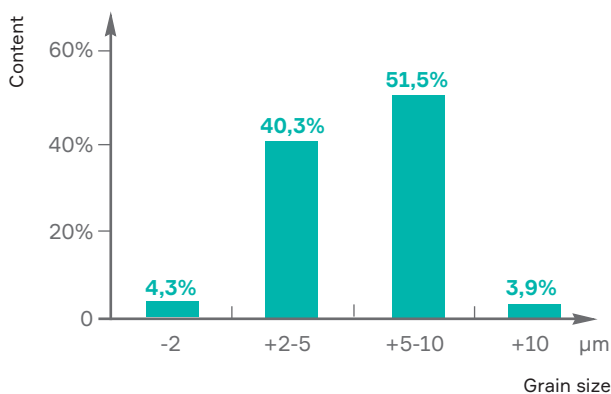


PBM 1-4 platform with bowls

Grinding at PBM 1-4

Material: Electrocorundum

Output: 24 samples / hour



Built-in control panel with timer



PBM 1-4 bowl