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Product Brochure



BROKEN SERIES

Stainless steel vibration crusher

BZM

Stainless steel vibration crusher for fibrous, tough, hard, or moist materials. Ideal for Chinese herb cell wall breaking and micronization to boost bioavailability.

<https://www.planetaryballmills.com/products/broken-series/stainless-steel-vibration-crusher.html>



— TENCAN POWDER —

Product Overview

Stainless steel vibration crusher for fibrous, tough, hard, or moist materials. Ideal for Chinese herb cell wall breaking and micronization to boost bioavailability.



Product Introduction

This machine can effectively crush any fibrous, high toughness, high hardness or materials with a certain moisture content. It is especially suitable for breaking the cell wall of traditional Chinese medicine, etc., aiming to improve the crushing requirements of drug bioavailability and materials that cannot achieve the required fineness using conventional methods.

Traditional Chinese medicine cell wall breaking processing (designed and manufactured in accordance with national "GMP" requirements), this machine has the characteristics of stable technology, high power consumption and efficiency, beautiful appearance, flexible use, simple operation, small footprint, and wide range of use.

It is especially suitable for the crushing of traditional Chinese medicine cell wall-breaking materials. This unit is suitable for the crushing of minerals, plants, fruits, Chinese herbal medicine cell wall-breaking crushing) Ganoderma lucidum, spore powder, mugwort, cordyceps, velvet antlers, antlers, ginseng, pearls, gastrodia elata, licorice, placenta, pollen, cattails, horns, antelope horns, roses, jasmine, safflower, honeysuckle, animals, plants, Chinese medicinal materials, fibers, etc.

This machine can effectively crush any fibrous, high toughness, high hardness or materials with a certain moisture content. It is especially suitable for breaking the cell wall of traditional Chinese medicine, etc., aiming to improve the crushing requirements of drug bioavailability and materials that cannot achieve the required fineness using conventional methods. This machine is suitable for ultrafine crushing of fibrous materials in various industries such as pharmaceuticals, chemicals, and food, such as Ganoderma lucidum, licorice, shrimp shells, and various bones and plant fibers. The crushing fineness can reach micron level. At present, the aircraft has reached the international advanced level.

Technical parameters

model	BZM-10	BZM-20
Public work volume (L)	10	20
Processing capacity (kg/h)	1~4	2~10
Feed particle size (mm)	≤3	
Grinding fineness (mesh)	120~1200 mesh (44~3.1um)	
Crushing range	Hardness: ultra-microfiber, high toughness, high grinding, homogenization, mixing	
Cooling method	water cooling	
Voltage(V)	220 or 380	220 or 380
Machine material	Stainless steel	Stainless steel
Power (kw)	3	4
Overall dimensions (mm) (length × width × height)	1250×800×1600	1300×850×1600
Weight (kg)	380	580
application	laboratory	Laboratory and pilot plant

Working Principle

Mechanical ultra-fine grinding equipment is a new type of vibration grinder. Based on the different characteristics of the materials, it adopts a number of advanced technologies and uses high-speed impact force and shearing force to cause the materials to be hit, squeezed, squeezed, and cut by the medium in the grinding barrel at high acceleration. It can achieve the ideal crushing effect in a very short time. The material is fluidized during the crushing process, so that each particle has the same stress state, achieving precise mixing (dispersion) effect while crushing. By adjusting parameters such as acceleration, operations with crushing and grinding as the main goal or precision mixing (mixing) as the main goal can be achieved.

This equipment adopts the working principle of vibration crushing. A certain amount of grinding media, such as balls, rods or columns of hard materials, is loaded into the grinding barrel (crushing chamber). The grinding barrel produces circular vibration in the counterclockwise direction under the action of external excitation force. The strong vibration of the grinding cylinder causes the medium in the grinding cylinder to produce a throwing motion. Under the action of this throwing motion, each medium produces a rotational motion in the same direction as the circular vibration. At the same time, the medium group also produces 3-5 low-frequency revolutions in the opposite direction to the circular vibration. As a result, the media sometimes spread out and sometimes collided with each other, producing positive impact force and lateral shear force on the material. The material is ground, broken and crushed under the impact, compression and shearing of two forces.

Product Features

- ①Designed according to GMP requirements: in good hygienic condition, the parts in contact with materials are polished stainless steel (304, 316L), which meets the hygiene requirements of food and drugs.; Easy to assemble, disassemble and replace materials ; Can be cleaned and disinfected with water, compressed air, alcohol or steam ; Equipped with sound insulation cover to reduce production noise.
- ②Applicable center particle size is 150 mesh-2000 mesh crushing requirements
- ③For materials such as pollen and Ganoderma spore powder that are required to break the cell wall, the wall breaking rate can be higher than 98%; □□□
- ④It can be adapted to any fibrous, high hardness, or material with a certain moisture content (3-5%); □□
- ⑤The crushing process is completely sealed with no dust spillage, 100% crushing, no drug residue, no loss of active ingredients, and no segregation.

Accessories & Customization

Accessories

Grinding jars, heating elements, sample holders, control modules and other matching accessories can be selected according to the product configuration.

Customization

For voltage, capacity, chamber size, process temperature or application requirements, please contact TENCAN for a suitable configuration.