蚂蚁科仪
Ants Scientific Instruments

Innovation Empowers Sample Preparation,
Intelligence Achieves Simplicity

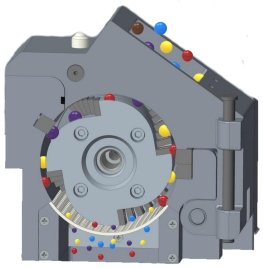
AM300/AM300S
Cutting Mill

蚂蚁源科学仪器（北京）有限公司
ANTS SCIENTIFIC INSTRUMENTS（BEIJING）CO., LTD.

AM300/AM300S Cutting Mill

The cutting mill can crush soft, medium-hard, tough, and fibrous samples quickly. It has a high cutting speed that is efficient for heat-sensitive sample processing. The mill has a three-phase motor that outputs strong power and high torque cutting force, allowing it to handle extremely complex samples. The instrument also has stepless speed regulation, making it adaptable to a variety of different samples, and motor braking for quick stops. When the grinding chamber is open, the instrument cannot operate, ensuring safety. Additionally, a cyclone separator can be installed in the instrument to handle fibrous or lightweight samples and enhance crushing efficiency. A spiral feeder can also be configured to minimize the necessary steps for handling small or granular samples, thereby improving experimental efficiency.

Working Principle



The cutting grinder achieves pulverization through the shearing effect created by the rotary knife, cutting prongs, and bottom sieve. Samples enter the grinding chamber through the feeding funnel, where the high-speed shearing of the cutting motor quickly pulverizes them. The pulverized samples are deposited into the collection container when their size is smaller than the bottom sieve aperture to complete the pulverization process

Performance Advantages

- ◎ AM300's efficient three-kilowatt motor ensures effective grinding of samples.
- ◎ The speed can be adjusted continuously between 100 and 3000rpm to accommodate different samples.
- ◎ The grinding chamber is made easier to clean with the use of plug-in rotary knives and bottom sieves.
- ◎ This product produces a low heat load, which makes it ideal for processing heat-sensitive samples.
- ◎ The control panel allows for easy adjustment of feed rate and feed volume, with loads being directly readable.
- ◎ The feed funnel is designed to be dustproof in order to minimize sample splashback. Additionally, am300s'grinding chamber can be fully opened for easy cleaning.
- ◎ The AM300S has a venting grid for easy sample collection.
- ◎ The chamber door is equipped with a safety lock protection system to ensure the operator's safety.

Application field

Agriculture

Environment

Medicine

Minerals

Feedstuff

Plastic

Technical parameter

Technical parameter	AM300S Cutting Mill	AM300S Cutting Mill
Feed material	Soft, medium-hard, tough, flexible and fibrous	
Material feed size*	70X90mm	
Final fineness	100um-250um((Depends on the nature of the sample.)	
Throughput	80L/h	
speed	100rpm-3000rpm	
Collector capacity	0.5L、3L、5L、30L	
Material of rotors	Stainless steel, tungsten carbide	
Type of rotary cutter	Parallel rotary cutter with three teeth and continuous rotary cutter with 24 teeth	
Bottom sieve aperture	Trapezoidal hole 0.2mm, 0.25mm, 0.5mm, 1.0mm, 1.5mm Round or square hole 2.0mm, 4.0mm, 6.0mm, 8.0mm, 10.0mm, 20.0mm	
Cyclone Separator Volume	Optional 0.5L, 1L, 3L, 5L, 30L	
W×H×D	455mm X1450mm X 715mm	
Net weight	~150kg	
Electrical parameters	220v·2200W	380v·3000W

选配指南
Optional Guide

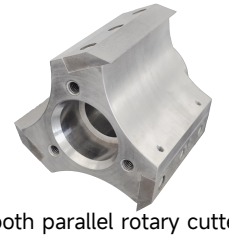
Screw feeder for small samples or granular samples. continuous feeding of small sized samples or granular samples

Tungsten Carbide Blades

cutting edge

The Cutting Mill is a versatile instrument that can be used for both coarse and fine pulverization of large samples.
Secondary pulverization is also possible by first pre-crushing and then fine crushing.
All of these capabilities are made possible by the availability of a wide range of accessories.

24-tooth rotary cutter



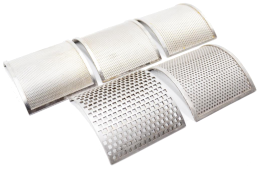
3-tooth parallel rotary cutter

Rotary knife types: Rotary knife materials:
1. Three-tooth parallel rotary knife, suitable for pulverizing large, thick general samples routinely.
2. 24 teeth continuous rotary knife, suitable for crushing complex samples as well as hard and brittle samples.

Stainless steel for regular crushing
and tungsten carbide square blade for hard and more complex samples to prevent heavy metal contamination of the crushed material.
This steel is resistant to heavy metal contamination and is mainly used for pulverizing in such conditions.

It is recommended to use stainless steel or titanium-plated material for the bottom sieve.

The bottom sieve can be of trapezoidal, round, or square hole type.

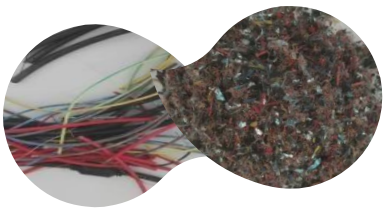


bottom sieve

Turning Knife Handle

Application Examples

Rubber



Cords

Sea cucumbers

Limb

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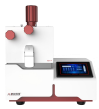
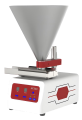
Milling Series

AM100S Vibratory Ball Mill	 AM200S Mortar Grinder	AM300 Cutting Mill	AM300S Cutting Mill	AM350 Beater Mill	AM360 Turbo Mill	AM400S Planetary Ball Mill
AM410 Planetary Ball Mill	AM420 Planetary Ball Mill	AM500S High Speed Rotary Mill	AM600S Knife Mill	AM700 Jaw Crusher	AM710 Extrusion Crusher	AM750S Bench Jaw Crusher
AM800 Disc Mill	AM800CC Disc Mill	AM810 Disc Mill	AM900 Vibratory Disc Mill	AM950 Vibratory Disc Mill		

Assisting Series

AF100S 3D Vibratory Sieve Shaker	AF150 Horizontal Sieve Shaker	AF200S Sample Automatic Divider	 AF300 Vibratory Feeder
AF400 Rotating Tube Divider	AF450 Rotating Sample Divider	AF500 3D Sample Mixer	AF510 3D Sample Mixer

Intelligent Series

AISP1678 / AISP1700 Intelligence Soil Preparation System	
	ADVM1001 / ADVM1001CS Vacuum Microwave Drying Series

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地址：北京市经济开发区经海二路29号院1号楼1单元4层

Add: Room 401, Floor 4, Unit 1, Building 1, No. 29, Jinghai 2nd Road, Kechuang 5th Street, Beijing Economic-Technological Development Area

德州生产基地：山东省德州市德城区袁桥镇中元科技创新创业园1#厂房

电话（Tel）：010-57791811

传真（Fax）：010-67656036

邮箱（E-mail）：ex-trade1@my-ant.com; ex-trade2@my-ant.com

网址（Web）：www.my-ant.com

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