

1. Ball mill



The auxiliary equipment of the sample ball making machine is configured to improve the yield of sample balls. Among the sample balls produced by the ball making machine, some have irregular shapes and are not ideal. However, through the grinding of the ball mill, the equipment can achieve ideal sample preparation, thereby improving the sample output rate of the sample preparation system.

Motor power: 1.5KW

Discharged ball sample: $\varphi 23$ - $\varphi 25$

Rotation speed: 1400 rpm

Overall dimensions: 1000mm × 600mm × 900mm

2.HTEP Environmentally friendly jaw crusher



This jaw crushing equipment is equipped with a built-in sound insulation membrane, features a sealed design, and can be connected to an external dust collector.

Technical Parameters:

model parameterproject	HTEP-1A	HTEP-2A	HTEP-3A
Discharge port size (mm)	100X125	100X60	125X150
Feed particle size (mm)	100	60	120
Discharge granularity (mm)	0-13adjustable		
Spindle speed (r/min)	490	650	650
Production efficiency (kg/h)	500-3000	500	1000-4000
weight (kg)	360	150	400
Overall dimensions (mm)	900X550X920	700X500X720	900X600X920

3.Laboratory conical ball mill



The HTQM conical ball mill is a small, lightweight, and multi-purpose grinding equipment used in laboratories. It can be used both dry and wet, and can also be used as a ball mill by replacing with steel balls. This equipment features a compact structure, convenient operation, small size, and light weight. It is commonly used in laboratories to match the XFD series single-cell flotation machines, XFG type hanging cell flotation machines, or flotation machines and other instruments of corresponding specifications. It is a small-sized equipment in the series of standardized laboratory grinding equipment.

model numberproject	HTQM150X50	HTQM150X100	HTQM240X90	HTQM360X160
Volume (L)	2.35	3.95	6.25	11.25
Grinding capacity (g)	200	400	2500	4000
Cylinder rotation speed (r/min)	277	277	96	90
Feeding particle size (mm)	<3			

Product particle size (mm)	0.074			
Motor power (kw)	0.55	0.55	0.75	1.1
Overall dimensions (mm)	770X640X1300			800X700X1190
Weight (kg)	90	110	170	300

4.HTSG Sealed double-roll crusher



The double-roll crusher is mainly used for medium and fine crushing of raw materials, such as coal, gangue, coke, limestone, sulfur ore, phosphate ore and other materials.

Its crushing method is roller extrusion.

The compressive strength of the crushed materials does not exceed 800kg/cm³.

This machine has a reasonable design and a simple structure. It is used in sampling and testing in industries such as coal, coking, mining, non-ferrous metal smelting, chemical industry, metallurgy, and building materials.

model number	HTSG 200*75	HTSG 200*125	HTSG 200*150	HTSG 250*150	HTSG 250*75	HTSG 300*300
Roller size (mm)	Φ200*75	Φ200*125	Φ200*150	Φ250*150	Φ250*75	Φ300*300
Feeding particle size (mm)	<13	<13	<13	<13	<20	<25
Discharge particle size (mm)	<3 Adjustable	<3 Adjustable	<3 Adjustable	<3 Adjustable	<3 Adjustable	<8 Adjustable

productivity (kg/h)	200-300	300-400	400-500	600-800	400-600	1500-2000
Motor power (kw)	1.5	3	3	5.5	5.5	2.4
Motor speed (r/min)	1450					
Power supply voltage (v)	single phase AC380					
Overall dimensions (mm)	630*450 *700	680*540 *750	700*590 *750	700*640 *750	900*660 *750	1200*750 *750
Machine weight (kg)	150	200	240	300	240	650
Roll material	high manganese steel					

5.HTCY-800 1000 1200 Portable sampler (Coal sampler)



The HTCY series portable sampler is a compact, convenient, flexible, and mobile spiral sampler. The sampler is not restricted by conditions such as site space, and can easily sample solid granular materials in cross-sections or at a certain depth. It is suitable for random sampling of samples in testing and experiments in industries such as electric power, coal chemical industry, metallurgy, building materials, and geology where there is no mechanized sampling equipment or it is inconvenient to implement mechanized sampling.

model number	HTCY-800	HTCY-1000	HTCY-1200
sampling depth	800mm	1000mm	1200mm
Sampling granularity	60mm		
power	1kw		1.2kw
voltage	220V		
weight	15kg	17kg	20kg
Overall dimensions	1260*500*300	1460*500*300	1660*500*300

6.Laboratory disc pulverizer



The HTYP series disc pulverizer features a compact structure, tight sealing, easy cleaning, and can be used for both dry and wet materials. The grinding disc is made of manganese steel alloy, which is durable, and the outer edge of the grinding surface is designed with an arc-shaped curved surface. The discharge particle size is small, with the finest reaching 325 mesh. It is also equipped with a mechanism for adjusting fineness and other characteristics.

I. Structural and Performance Characteristics:

1. The disc pulverizer is mainly composed of a machine body, a base, a main shaft, a movable disc, a fixed disc, an end cover, a hopper, etc.

2. Characteristics: Power is transmitted to the pulley through a V-belt to drive the main shaft to rotate, making the movable disc and the fixed disc move relatively, thereby pulverizing the sample. The particle size of the discharged material can be controlled by adjusting the gap between the grinding discs through the large handwheel, small handwheel, main shaft, etc. The machine body, end cover, and upper cover form a working chamber, where the material is pulverized. Materials are added from the feeding port above the end cover, enter between the two grinding discs, and the sample is pulverized due to the extrusion effect. The pulverized sample flows out from the gap between the two grinding discs and falls into the hopper below. The principle of the adjustment mechanism is: loosen the large

handwheel, rotate the small handwheel to make the adjusting screw rotate and push the main shaft, causing the movable disc to move forward or backward, thereby adjusting the gap between the two grinding discs to achieve the purpose of adjusting the material particle size.

II. Main Technical Parameters

model number	HTYP- φ150	HTYP- φ175	HTYP- φ200	HTYP- φ250	HTYP- φ300	HTYP- φ 400	HTYP- φ 500
Diameter of the millstone (mm)	φ150	φ175	φ200	φ250	φ300	Φ400	Φ500
Feeding particle size (mm)	≤4	≤6	≤8	≤8	≤10	≤13	≤18
Discharge particle size (mesh)	50-325	50-325	50-325	50-325	50-325	50-325	50-325
productivity (kg/h)	6-20	10-35	30-60	50-80	70-100	200-300	300-500
Motor power (kw)	1.5	1.5	2.2	3	3	7.5	11
Power supply voltage	380V50HZ						
Spindle speed (mm)	800	800	800	800	650	650	650

7.HTSZH-4 Automatic Standard Vibrating Screen Machine



Product Overview:

The HTSZH-4 Automatic Standard Vibrating Screen Machine is a precision screening device designed for laboratory use. It combines rotary and vibratory motions to ensure accurate particle size analysis, featuring timed screening, low noise, compact design, and easy operation. Ideal for coal, metallurgy, power, and chemical industries.

Working Principle:

The machine consists of transmission, oscillation, vibration, clamping mechanisms, and electrical components. The motor drives the worm gear and cam mechanism via a shaft, generating rotary motion through an eccentric wheel and vibratory motion via a reciprocating tappet. The top cover can be clamped (clockwise rotation) or released (counterclockwise) for adjustable positioning.

Technical Specifications:

1. **Compatible Sieves:** $\Phi 200\text{mm}$, max stack height $\leq 380\text{mm}$
2. **Oscillation Frequency:** 221 times/min

3. **Rotation Radius:** 12.5mm
4. **Vibration Frequency:** 147 times/min
5. **Amplitude:** 6mm
6. **Power Supply:** AC, 3-phase 380V, 50Hz
7. **Motor Power:** 370W
8. **Weight:** 100kg

8.HTZY series Sealed Sample Preparation Grinders



The HTZY Series Sealed Sample Preparation Grinders are primarily used for pulverizing raw materials (e.g., coal, coke, gangue, ores) into fine powders for laboratory testing.

Working Principle: Vibration grinding

Feed Particle Size: <13 mm

Material Compressive Strength: $\leq 800 \text{ kg/cm}^2$

Designed with a compact structure, easy maintenance, and user-friendly operation, these grinders are widely applied in industries such as construction, metallurgy, mining, coal, coking, chemicals, and non-ferrous metal smelting for sample preparation.

Working Principle & Structural Features:

The grinder consists of:

1. **Housing:** Cold-rolled steel enclosure for sealing, safety, and aesthetics.
2. **Base:** Cast from high-quality damping materials to minimize vibration during operation.
3. **Damping System:** High-performance springs (high strength, elasticity) + rubber pads for dual damping, reducing noise and ensuring stability.

4. Power Unit: Motor, eccentric weight, and support cylinder.

The motor drives the eccentric weight to generate high-speed orbital motion, transmitted to the grinding assembly.

5. Grinding Assembly: Grinding bowl, ring, and hammer.

Materials are crushed and ground into fine powder via high-frequency impact.

6. Clamping Device: Lever and screw mechanism to secure grinding components for efficient power transfer and safety.

Technical Parameters:

Parameter	Unit	HTZY-1	HTZY-2	HTZY-3
Max. Load Capacity	g	100	100X2	100×3
Feed Particle Size	mm	<13		
Output Particle Size	mm	0.074–0.124 (120–200 mesh)		
Grinding Time	min	2–5		
Motor Power	kW	1.1	1.5	1.5
Power Supply		3-phase 380V, 50±1 Hz		
Dimensions (L×W×H)	mm	520 × 500×730	550×550×840	
Weight	kg	140	172	180

9.HTCP series sealed hammer crusher



This equipment performs continuous rapid-impact cyclic crushing on materials of various hardness levels. Developed by incorporating advanced international sampling technologies and improved based on the original CP model, it complies with GB/T 474 “Preparation of Coal Samples” and GB/T 18666 “Inspection and Acceptance Methods for Commercial Coal Quality” .

Widely used in coal, power, metallurgy, chemical, environmental protection, geology, and research sectors, it combines hammer crushing and wet coal crushing, making it ideal for processing both dry and wet coal – a superior solution for coal washing plants.

Product Features:

- 1.Manual cleaning device ensures no clogging for materials with $\leq 25\%$ moisture.
- 2.Key components use special materials, offering 3-5 \times longer lifespan than standard parts.
- 3.Zero dust leakage, meeting environmental standards.
- 4.Fully sealed design with access door for safe operation and easy maintenance.
- 5.Plug-and-play installation operates on level ground without fixed foundations.

6. Complies with GB/T 474-1996.

Technical Parameters:

Feed size: <60 mm

Discharge size: <1 mm / <3 mm / <6 mm (adjustable)

Capacity: 200–300 kg/h

Power: 1.5 kW

Power supply: 380 V or 220 V

Weight: 100 kg

Dimensions (L×W×H): 750 × 450 × 800 mm

10.HTEP Series Jaw Crusher



HTEP Series Jaw Crusher is mainly used for medium and fine crushing of raw materials such as coal, coal gangue, coke, limestone, pyrite, phosphate ore, etc. The crushing method is flexural extrusion, and the lump size of the material to be crushed should be 10-60 mm smaller than the feed port size of the selected model. For specific dimensions, please refer to the technical parameters.

The compressive strength of the material to be crushed should not exceed 1500 kg/cm³. If there are special requirements for the crushed material, please place an order in advance. This machine features a reasonable design, simple structure, easy maintenance, and user-friendly operation. It is widely used in metallurgy, mining, laboratory testing, coal, coking, and other industries.

Jaw Crusher Working Principle and Structural Features:

The crusher mainly consists of the frame, eccentric shaft, fixed jaw, movable jaw, adjustment device, transmission device, and power unit. The frame comes in two structural forms: one is integrally cast, and the other is welded from high-quality steel.

The eccentric shaft is made of high-quality carbon steel, with bearings installed at both ends and fastened to the frame. The movable jaw and the frame are fixed with a pair of ZGmm13 cast tooth plates. When the motor drives the belt pulley and

the eccentric shaft to move the jaw plate back and forth, the tooth plates crush the material to achieve the purpose of crushing.

The adjustment device is mainly used to adjust the size of the discharge port. The toggle plate system not only adjusts the gap but also acts as a safety device. When overfeeding occurs or metal objects are encountered, it breaks first to protect other components from damage.

Jaw Crusher Technical Parameters:

Model Item	HTEP-1	HTEP-2
Feed Opening Size (mm)	125X150	100X60
Maximum Feed Size (mm)	100	60
Discharge Size (mm)	3-10 adjustable	
Power (kw)	3	1.5
Power Supply	AC380±10% 50Hz	
Machine Weight (kg)	380	100

11.HTCPS series hammer type crushing and shrinking machine



The sealed hammer crushing and splitting machine is mainly used for medium and fine crushing of raw materials. Such as coal, coke, limestone, pyrite, phosphate rock, coal gangue, and various other materials that need to be crushed. Its crushing method is chopping. The maximum particle size of the crushed material should be less than 10-60 mm of the feed opening size of the selected machine model.

The machine is reasonably designed and has a simple structure. It is widely used in metallurgy, building materials, laboratory testing, and other industries. The fully sealed design ensures no pollution, making it the preferred crushing machine for the laboratory testing industry. The product meets national standards.

Operating Principle and Structural Characteristics:

The fully sealed hammer crusher mainly consists of a machine body, rotor system, hammer heads, screening grate, transmission device, and power part. The machine body adopts two structural forms, one is an integral casting, and the other is welded with high-quality steel plates. It mainly gathers the material inside the body for the hammer heads to strike, achieving the purpose of crushing.

The rotor is assembled from a spindle, disk, hammer heads, etc. When the motor drives the rotor through the pulley, the hammer heads rotate at high speed,

generating strong impact force. The material enters the striking zone of the rotor hammer heads and is crushed. When the crushed material reaches the required particle size, it falls into the material bin. The particle size is controlled by the size of the screening grate. The output volume is also directly proportional to the size of the grate holes.

The small-sized sealed hammer crusher is also equipped with a manually controlled feed gate on the material inlet hopper to avoid dust generated by high-speed rotation. To enhance the impacting force, large and medium-sized hammer crushers are also equipped with flywheels for energy storage.

Technical Parameter:

Model	HTCPS-250*360A	HTCPS-180*150A
Feed Particle Size	< 150mm	< 80mm
Discharge Particle Size	≤13-3mm (adjustable)	≤6-1mm
Production Rate	0.6-1.5T/h	0.3-0.5T/h
Weight	300kg	136kg
Dimensions	910*1000*1360mm	700*580*1130mm
Motor	3KW	1.5KW
Working Power Supply	Three-phase 380V	Three-phase 380V

12.HTXPZ Series Roll Crusher



The HTXPZ series roll crusher is primarily used for medium and fine crushing of raw materials such as coal, coal gangue, coke, limestone, sulfur ore, and phosphate ore. The crushing method is roller extrusion, suitable for brittle materials. The crushed materials are mostly in regular flake shapes, with a compressive strength ≤ 60 MPa and hardness \leq Grade 3. Material moisture content exceeding 6% may cause particle agglomeration.

Working Principle and Structural Features:

1. Crushing System: Equipped with a pair of counter-rotating rollers. Materials are fed from the hopper into the gap between the rollers, crushed, and discharged from the bottom outlet.

2. Adjustable Particle Size: Achieved by adjusting the roller gap. Rollers are made of heat-treated carbon structural steel with medium hardness.

3. Design Advantages: Compact structure, easy maintenance, and simple operation. Sealed design ensures pollution-free operation. Widely used in coal, coking, mining, and metallurgy industries for sampling and testing.

Technical Parameters:

Model	Feed Size (mm)	DischargeSize (mm)	Capacity (T/h)	Power (KW)	Weight (kg)
HTXPZ200×75	<13	1-3	0.2-0.5	1.5	215
HTXPZ200×125	<13	1-3	0.5-1.5	3.0	285
HTXPZ200×150	<13	1-3	0.5-2.0	3.0	305

13.HTSMP series wet coal crusher



HTSMP series wet coal crusher is mainly used for coarse, medium, and fine crushing of brittle materials with a moisture content of around 30%, such as coal, coal gangue, coke, limestone, etc. The crushing method is impact-splitting, and the compressive strength of the materials to be crushed ranges between 800–1500 kg/cm².

The machine features a rational design and compact structure, making it widely used in industries such as coal, metallurgy, building materials, and mining. It complies with national standards.

Working Principle and Structural Features:

The SMP Series Wet Coal Crusher mainly consists of the body, rotor system, swing hammers, movable screen grate system, transmission device, and discharge section. Key components are mounted on the body. During operation, materials are gathered in the crushing chamber and continuously impacted by high-speed hammers to achieve crushing.

The rotor system, composed of the main shaft, discs, and hammers, serves as the primary crushing mechanism. When the motor drives the rotor to rotate at high speed via a belt pulley, the hammers generate intense splitting force. Materials entering the crushing chamber through the feed inlet are shattered by the hammers to meet the crushing requirements.

For materials with certain moisture content, they first pass through the movable screen grate system for preliminary screening before entering the crushing chamber. Wet fine particles and small granules are directly discharged into the collection bin after screening, while larger particles are crushed and then fall into the collection bin through the grate plate. Productivity is proportional to the discharge particle size.

Technical Parameters:

Model Specification	Feed Particle Size (mm)	Discharge Particle Size (mm)	Production Capacity (T/h)	Auxiliary Power (KW)
HTSMP300×200	≤65	1–6	0.8—1.5	1.5
HTSMP400×250	≤80	1–6	2.0-4.0	3
HTSMP400×600	≤120	6–20	3.0-9.0	7.5

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