

sample divider for automatic reduction of coal and ores

Sample divider is a kind of special equipment used for representative division of bulk granular or powder material samples, which is widely used in the automatic shrinking link in the process of material sampling.

Sample Divider

The design of this sample divider is strictly based on the relevant national standards for sampling and sample making, such as Method of Preparing Coal Samples (GB 474), Methods of Sampling and Acceptance of Commodity Coal Quality (GB/T 18666), and General Rules for Bulk Mineral Product Sampling and Sample Making (GB/T 2007), etc., which ensures that the samples obtained have good representativeness and consistency.

Characteristics

1. High-precision sampling: the use of equal amount of multi-port rotary sampling mechanism, to ensure that the amount of material obtained from each sampling port is basically the same, reducing the systematic error.
2. Compact structure, stable operation: reasonable body structure, occupies a small space, internal moving parts drive smooth, low noise.
3. Full-automatic control: It supports linkage with the upper system to realize unattended operation. some models can be matched with PLC system for remote monitoring.



4. Wear-resistant design: the part in contact with the material is made of high-strength wear-resistant material, adapting to high hardness ore or coal samples with high sand content.
5. Multi-specification adaptation: can be customized according to the material particle size, flow rate, sample ratio and other requirements.

Core Advantages

1. Accurate representative reduction: effectively prevent artificial deviation when manual reduction, ensure the comparability of samples in physical and chemical testing.
2. High-efficiency operation: greatly improve the speed of sample preparation, shorten the experimental preparation time, to adapt to the rapid testing process.
3. Strong compatibility: It can be flexibly combined with crusher, drying box, belt sampling machine and other equipment to form a complete automatic sample collection and preparation system.
4. In line with a number of national standards: for coal, ore and other commodity inspection, import and export trade and quality inspection and certification to provide a standardized sample source.

Working Principle of Sample Divider

1. Material feeding: crushed coal or ore is fed into the entrance of the reduction machine through hopper or conveyor belt.
2. Sampling Mechanism Rotation: The core sampling part is the equally spaced sampling groove or sampling knife plate, which rotates at a constant speed under the drive of motor.
3. Equal amount of diversion: the material to be reduced by gravity or belt falls into the rotating sampling mechanism, by a number of channels will be equal to the proportion of the sample diversion to different sample collection containers.
4. Non-sample part discharge: the part not selected as sample is discharged through the discharge port to form a representative sample.

Application Fields

1. Coal industry: used in coal mines, coal washing plants, thermal power plants for the reduction and testing of raw coal and commercial coal samples.
2. Iron and steel metallurgy: processing iron ore, sinter ore, pellet ore and other raw material samples, for quality acceptance and batching analysis to provide a basis.
3. Non-ferrous metal and geological exploration: used in bauxite, manganese ore and other non-ferrous minerals sampling, sample making process.

4. Building materials industry: applied to the quality testing of cement, limestone, quartz sand and other granular materials.
5. Third-party testing organizations: provide legally valid test samples to meet the accuracy requirements of test reports.
6. Ports and import and export trade: for commodity coal, mineral products, handover inspection and fair sampling.

Model	TWF
Particle size for reduction	≤3 to 13mm
Reduction ratio	1/16 to 1/2(adjustable)
Production rate	800 to 1200kg per hour
Motor power	0.4kw
Power supply	three phase 380Vac
Weight	100kg
Dimensions	750x670x1000mm