

QPEC Bond Index Mill Closeup View



QPEC Bond Index Mill Full View

Applications

Mechanical device for standard bench scale grinding investigation to define the Bond Index number. Establishment of the number permits the calculation of the input grinding power required to produce the desired tonnage of a specific material ground to a specific mesh or micron size and thereby the grinding mill size.

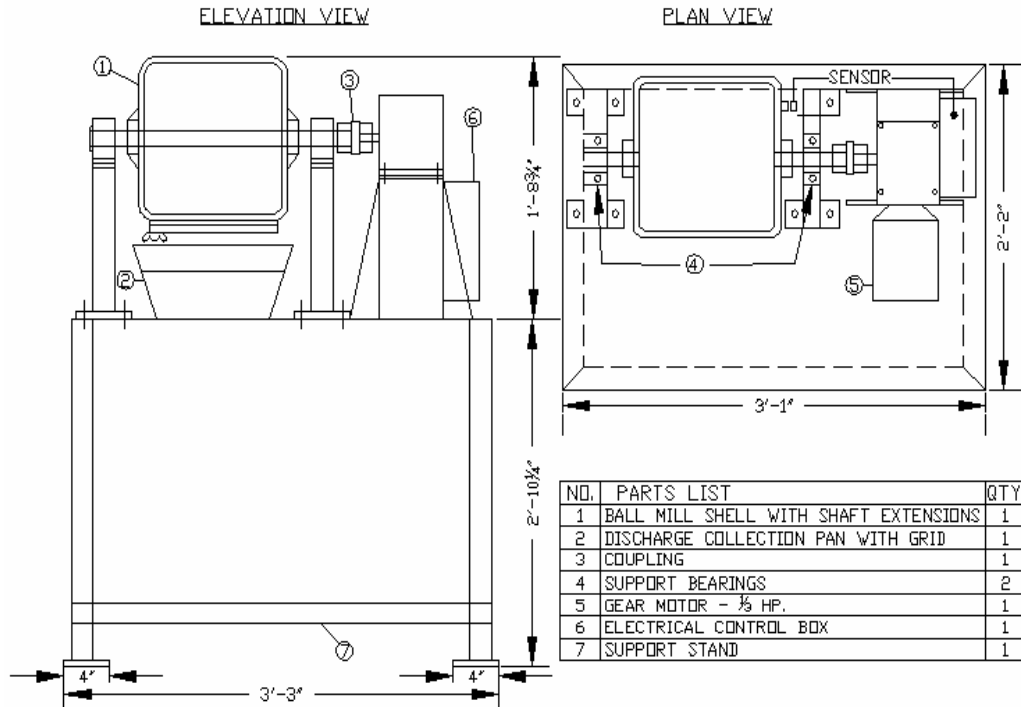
Advantages

The Quinn package grinding unit (Bond Index type) provides an automated system for testing the grindability of ores. Important features are:

1. The grinding mill is 12" inside diameter by 12" inside length with radius corners to meet Bond specifications and for ease of cleanout. A large, easily detachable gasketed discharge cover plate is provided.
2. The ball charge provided closely approximates the required Bond charge (285 balls ranging in size from 1/2" to 1 1/2").
3. Direct drive from 1/3 hp, 69 rpm gearmotor provides required Bond grinding speed. Gearmotor is provided with a magnetic brake.
4. Electrical control package includes an on-off switch, magnetic probe with visual rotation indicator which is manually set to the number of mill revolutions desired. The counter indicates the countdown and at zero shuts off the drive gearmotor which is provided with a magnetic brake to prevent overtravel. Operator attention during operation is not required.
5. A "jogging" button is provided to position the mill with discharge cover plate for ease of removal. The mill is then electrically "jogged" to the down position for dumping the mill contents into the hopper.
6. The hopper is provided with a screen to trap, wash, and separate the ball charge from the ground slurry or dry solids where dry grinding is involved.
7. All components are conveniently mounted on a compact structural frame with built-in working platform.

(Dimensions and specifications on reverse side.)

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General arrangement drawing of Quinn (Bond Index Type) grinding unit

Quinn (Bond Index Type) Ball Mill

Specifications

Grinding mill: 12" inside diameter x 12" inside length with radius corners. Fine-grained ductile iron casting. Easily removable gasketed cover.

Support bearings: Self-aligning pillow block bearings.

Gearmotor: 1/3 hp, 69 rpm, 1 ph, 60 Hertz (or 50 Hertz), 110/220 volt T.E. gearmotor with magnetic brake.

Coupling: Flexible type coupling.

Electrical package: Consists of remote positioned magnetic prove counter. Visual indicator, on-off push buttons and "jogging" button are all assembled in enclosed control box and conveniently mounted on the side of the structural support frame.

Discharge hopper: Fabricated of steel and designed to receive mill discharge. Includes coarse screen to collect and permit washing off grinding charge from ground slurry or dusting off dry ground solids.

Structural frame: All components assembled on structural frame with convenient operating table area.

Painting: Surfaces wire-brushed, primed with rustoleum, and painted green enamel.

Assembly: Unit tested and shipped completely assembled.