



International Combustion (India) Limited

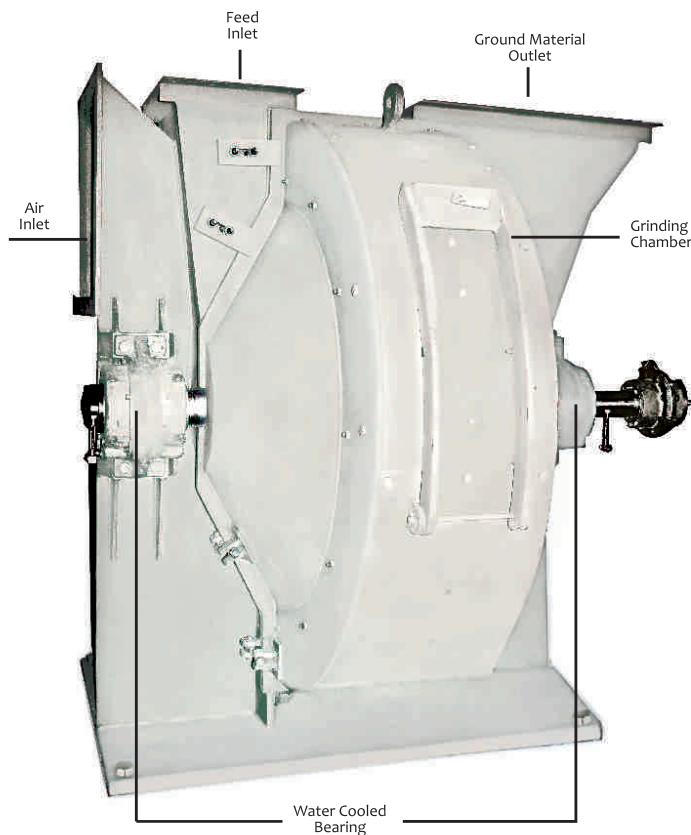


Raymond No. 3 Impax Pulverizers

The Raymond No. 3 Impax Pulverizer is a series of highly robust, air swept swing hammer mills, designed for medium and fine grinding of softer non-metallic minerals, pigments, clay materials, chemicals, Insecticides, food and many manufactured products.

Recommended feed size is 12 mm and below which can be ground to fineness ranging between 10 mesh to 300 mesh depending upon the feed material characteristics and type of classifier used.

The Pulverizers are offered complete with Rotary / Vibratory Feeder, Classifier, Cyclone, System Fan and Bag Filter with Vent Fan in order to provide efficient and dustless operation.



Principle of Operation

The Impax Pulverizer uses a swing hammer rotor assembly. Materials is fed at the inlet and the ground material is discharged from the outlet opening. A circulation air stream delivered by the System Fan carry the powder to a Classifier driven by a variable speed drive. Ground material of the desired fineness is delivered to a Cyclone Collector and product discharge is from the bottom fitted with a motorized rotary valve.

The oversize material from the Classifier is discharged back to the mill for further grinding along with the fresh feed. The more or less clean air from the Cyclone, flow back

to the Pulverizer through the system Fan in closed circuit operation. The circuit operates under a negative differential pressure and is provided with a vent line which, via a Bag Filter and vent Fan, discharge clean air to the atmosphere.

The Pulverizer can be set up to operate either in closed or open circuit depending on the application requirements.

Adjustments for products fineness are made with the size, number and position of hammers used and by adjustments to the number and position of Classifier blades as well as the speed of the Classifier.

Design and Construction

The Raymond No. 3 Impax Pulverizers reflect our leadership in grinding technology. The compact design features heavy duty steel plate construction with high structural integrity, replaceable wear liners and water cooled, self aligning spherical roller bearings. Drive is through V belts or flexible couplings directly connected to the drive motor.

Maintenance friendly design includes fast release latches on the split housing to enable quick access and minimize downtime.

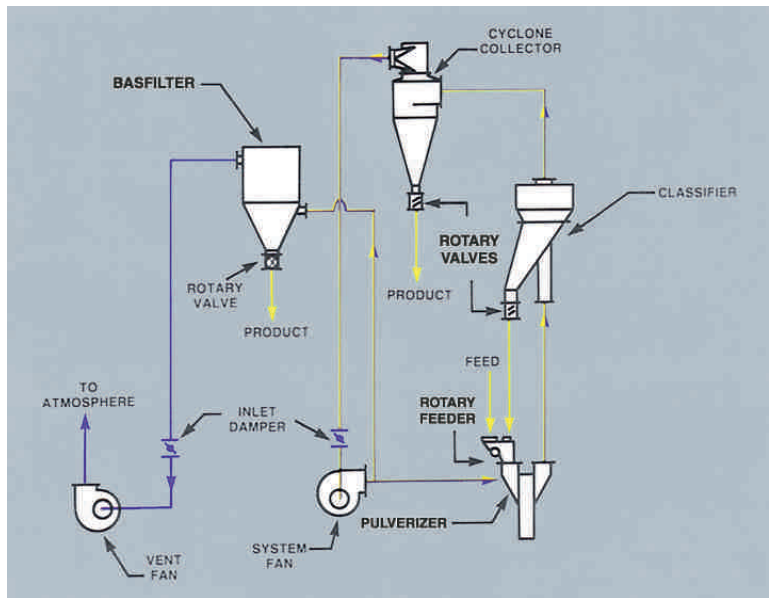
Hammers are available in a range of different shapes and materials to suit application requirements. The heavy duty rotor assembly is dynamically balanced to ensure smooth operation with low level of vibration. The No. 3 range of Pulverizers have unparalleled consistency to deliver a uniform quality of production.

Pulverizer Plant System

Plant systems are designed to suit the requirements of specific applications. In view of system flexibility the technical services we offer, include design of pulverizing with drying / calcining / beneficiation applications, according to customer requirements.

For drying / calcining requirements, hot air from a fired air heater or waste heat source is introduced into the grinding circuit which dries the feed material as it is being ground and swept through the mill to the collection system. When required, a portion of the dried material may be mixed with the wet feed to 'condition' the same for optimum drying.

For grinding combustible materials the Pulverizer can be arranged to operate with an inert atmosphere and require explosion relief vents, heavier construction and other special design features.



Typical Imp Mill System

The Pulverizer systems can be offered complete with MCC, plant instrumentation, and other special features according to customer requirements.

Raymond No. 3 Impax Pulverizer Data

| Pulverizer Model | Drive kW max | System Fan kW max | Approx. Machine Weight kG |
|------------------|--------------|-------------------|---------------------------|
| 313 | 25 | 15 | 530 |
| 343 | 75 | 30 | 1180 |
| 353 | 150 | 50 | 2860 |
| 363 | 250 | 75 | 6810 |

Actual data may vary depending on specific application requirements.

Pulverizer with simultaneous drying system

Certain applications require that a certain amount of moisture in the form of free water must be removed in order to meet the specifications of the pulverized material and to allow it to be used, bagged and transported to desired specifications. Such materials include chemicals, certain minerals and food products.

The Pulverizer with drying requires heated air, which may be from fired air heater, or waste heat source. In this system the heated air is allowed to circulate that dries the material as it is pulverized and swept from the mill.

A vent is provided to remove a portion of the moist air. The balance of the warm air is returned to the system, where it is mixed with fresh, dry, warm air coming from the air heater.



Model 343 No. 3 Impex Pulverizer

Typical Applications

- Asbestos • Bark • Bentonite • Chemicals
- Calcite • Coal • Chalk • Carbon Black
- Calcined Bone • Diatomaceous Earth
- Gypsum • Hydrated Lime • Jute Sticks
- Kaolin Clay • Limestone • Leadoxide
- Ultramarine Blue • Magnesium Oxide
- Marble • Pigments • Prussian Blue
- Pesticide formulations • Roasted Tamarind Seeds
- Soya Flour • Graphite • Talc • Sandal Wood
- Wood Waste



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