



Riley Power
a Babcock Power Inc. company

TECHNICAL OVERVIEW

Riley Power's Atrita® Coal Pulverizers Reliable Cost-Effective Equipment for Low or Moderate Grinding Capacity Requirements

Overview

Riley Power Inc. (RPI), a Babcock Power Inc. company, has been designing, manufacturing and servicing steam generators and associated auxiliary equipment for over 90 years for the power generation and industrial markets. Over 70 years ago, RPI introduced the first Atrita® pulverizer as a cost-effective, reliable alternative to ball tube mills and vertical spindle mills. Since its introduction, RPI has furnished more than 1600 mills to over 500 installations throughout the world. RPI also has continuously incorporated design improvements and new materials to make today's Atrita® design one of the most reliable pulverizers in its capacity range installed at coal-fired plants. In addition to designing and manufacturing Atrita® mills, RPI maintains an extensive inventory of replacement parts and a fully staffed service organization to respond to our customers for all their aftermarket needs.

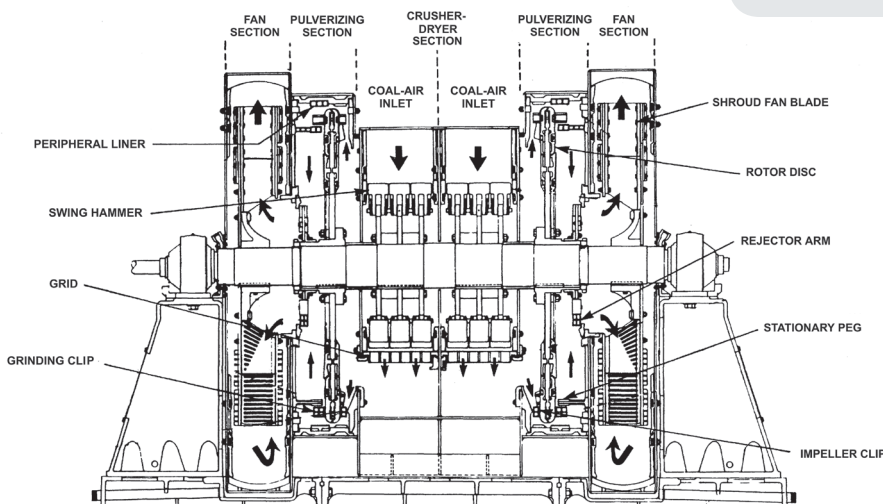
Features / Benefits

Three standard family sizes in a total of 24 configurations allows us to supply pulverizers to suit almost any customer's requirements

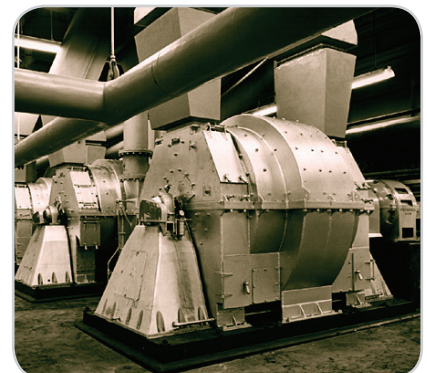
- Extensive custom engineering not required
- Initial cost is lower and delivery time is less
- Normal grinding capacities range from 7,000 pph to 60,000 pph

Lower installation and commissioning costs

- Lightweight, compact design allows installation in minimal space – small footprint and low overhead height
- Crusher, grinding and fan sections all combined into one integral shop-assembled package on a common base plate – easily leveled and positioned
- Separate pedestals for main bearings are shop-aligned and positioned with dowel pins on base
- Integral fan eliminates the need for a separate primary air fan with attendant controls, foundation, motor, and space



Atrita® Cross Section



Atrita® Pulverizer



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Features / Benefits (cont.)

Built for Dependable Service

- Integral fan reduces power consumption
- Recently developed DynaRing™ classifier produces an improvement in coal fineness of 10 percentage points passing through 200 mesh and over 1 percentage point improvement passing through 50 mesh
- No metal-to-metal contact in pulverizer section
- Each Atrita® is shop-assembled and dynamically balanced and tested before shipment

Easy Maintenance

- Crusher section adjustment can be made on-line and does not require a shutdown
- Key pulverizing elements are faced with wear-resistant materials allowing coal fineness to be maintained over long periods of operation without the need for periodic adjustments
- Wear-resistant materials line the facing surfaces of the pulverizer elements and the peripheral lining of the fan section
- All pulverizer parts are accessible by removing the top half of the pulverizer housing
- Repairs, part changes and inspections can be made from a standing position
- All parts of the pulverizer rotor can be accessed from a single point by hand-rotating the entire assembly
- Bearing housing location permits easy access to bearings without disturbing the shaft or bearing pedestals

Features / Benefits (cont.)

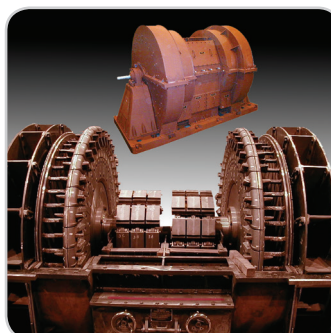
- Bearings isolated from pulverizer housing to minimize transfer of heat
- Bearings protected from dust and dirt by seals
- Exceptional availability has been confirmed by the National Electricity Reliability Council (NERC)/GADS data

Responds rapidly to load changes

- Operates with only a small inventory of coal
- Quick start-ups and shut-downs
- Flow and temperature of primary air are automatically adjusted to match coal feed rate and coal moisture

Potential for pulverizer fires significantly reduced

- Integral fan purges the pulverizer of coal dust after the coal feed is stopped
- As raw coal and primary air enter the crusher section during start-up, air temperature is lowered as coal moisture is evaporated and only relatively cool air comes in contact with the pulverized coal



*Easy Access for
Maintenance*

Safety^a

People. Power. Projects. We're giving safety the third degree. Babcock Power Inc. and its subsidiaries place the safety, health and security of our people at the core of our company values. Our team is our most valuable resource, generating solutions everyday to deliver safe, clean, reliable energy globally. With a keen focus on safety, Babcock Power Inc. conducts business in a manner that protects our people, our customers and the environment. From innovation to generation, we are proud of our award-winning safety record and are committed to operating with integrity and excellence.

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