

Raymond® Guide to Quality Equipment

Reliable equipment for the process industries

- Latest engineering techniques
- State-of-the-art manufacturing
- Exclusive testing resource center
- OEM replacement parts
- Full range of technical services



Raymond's long established capability to supply processing equipment and systems is the key to the success of our product line. It is the result of many years of specialized experience in the design, development and application of reliable equipment for the process industries.

Raymond® equipment and systems are known for their quality and ability to perform, and are supported by our engineering staff, OEM aftermarket parts, and technical service departments. Starting with fully objective, practical and cost-conscious recommendations, we custom design and manufacture our equipment to meet your specific needs.

Engineering capabilities

Every unit is custom designed utilizing the latest engineering techniques and processes. This includes two and three dimensional CAD modeling, Finite Element Analysis (FEA) for mechanical and thermal stress analysis and Computational Fluid Dynamics (CFD) for optimizing designs for airflow and heat transfer related issues.

Technical services

Our experienced field service engineers are available to assist with commissioning, maintenance and troubleshooting of our complete product line.

Manufacturing

Our products are manufactured in facilities that we have comprehensively assessed as possessing state-of-the-art manufacturing resource planning systems, production equipment and quality assurance techniques in support of fabrication, welding, machining, assembly and testing.

Testing resources

Our pilot plant facility is used exclusively to test and demonstrate the capabilities of Raymond® equipment under simulated production conditions. It houses a wide range of pilot and full-scale equipment capable of grinding or classifying virtually any non-hazardous mineral, chemical, food or other material. Tests are conducted on large material lots to determine the physical data needed for proper equipment selection.

OEM replacement parts

Raymond® original parts are the best match for your equipment. We maintain a database of the original specifications of all equipment, by serial number and model, resulting in an accurate record for each piece of equipment including custom designed variations for specific applications, ensuring that the parts you order are always correct.

Industrial Milling Equipment



Raymond® Roller Mill

Air-swept vertical ring-roll mill with integral classification system for fine to medium grinding of a variety of soft to medium hard non-metallic minerals.

- Available in 8 sizes, ring diameter 30" to 120"
- Capacities to 80 tph, fineness from 20 mesh to 99.99% passing 325 mesh
- Static or dynamic classifier options
- Flash drying capability



Raymond® Imp™ Mill

Versatile and dependable high-speed, air-swept, swing hammer impact mill, well suited for fine and medium-fine grinding of softer non-metallic minerals, coal, grains, various chemicals and fibrous materials.

- Range of capacities ¼ to 80 tph of pulverized product, fineness from 20 mesh to 99.9% passing 324 mesh
- Heavy-duty design for continuous 24 hour operation with minimum maintenance
- Ideal for simultaneous thermal processing applications



Raymond® Bowl Mill

Air-swept vertical mill that is considered to be the finest machine available for pulverizing coal and petroleum coke. It provides a safe and efficient means of uniformly drying and pulverizing these fuels.

- Grinds quietly, no metal-to-metal contact
- Low maintenance, minimum wear
- Capacities to 100 tph, fineness up to 95% minus 200 mesh
- Integral drying system permits handling high moisture fuels
- Hybrid dynamic classifier option available



Raymond® Vertical Mill

Specialized unit for pulverizing materials in the extreme fineness range. A vertically arranged high-speed, air-swept hammermill with integral air classification.

- Two sizes provide capacities from 100 to 10,000 pounds per hour, fineness to 95-99% finer than 5-10 microns
- Unit swings open easily for inspection, cleaning and maintenance
- Compact design required minimal floor space



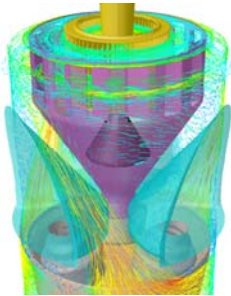
Raymond® Ultra Fine Mill

Air-swept vertical ring mill with integral classification designed to produce extremely fine powders for use in various applications including coatings, fillers and pigments.

- Will generate product as fine as 50% passing 2 microns or as coarse as 50% passing 20 microns
- Low classifier speed, high fineness separation
- Efficient ultra fine grinding with low specific energy consumption
- Flexible grinding element arrangement to suit product requirements

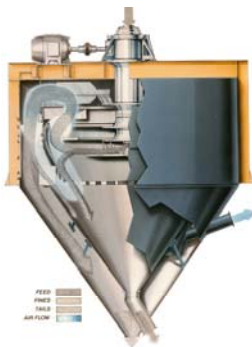
Classification Equipment

Raymond® classifiers are designed for use as independent units or in circuit with pulverizing equipment, efficient designs maintain optimal control of fineness.



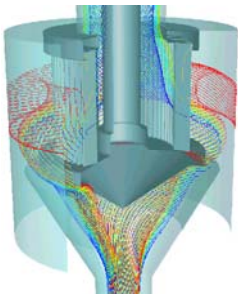
Raymond® Hybrid Turbine Classifier for RB Bowl Mills

The patented design enhances system and process performance. Produces particle size distribution compatible with improved flame characteristics while reducing emissions.



Raymond® Mechanical Air Separators

Single and double whizzer in sizes from 30" to 24'. Accurate fines separation to 325 mesh (44 microns).



Raymond® Jet-Stream™ Classifier

Available in 4 sizes and capable of producing material having a top size of 5 microns or less.

Raymond® Integral or Instream Classifier

Double cone, single or double whizzer and turbine classifiers for use in conjunction with Raymond® roller, Imp™ and bowl mills. Top size classification from 20 mesh to 10 microns or less.

Flash Drying Equipment

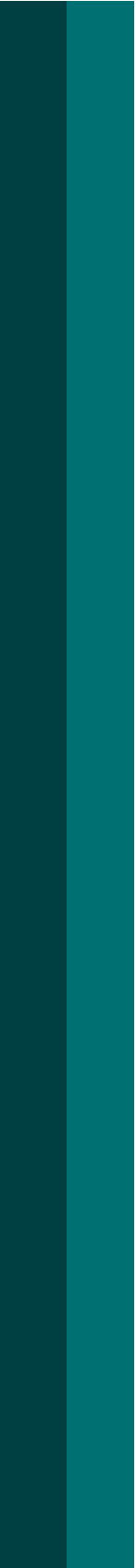
Raymond® flash drying systems are simple to operate and well known for their high on-line availability for tough applications involving fine, non-metallic, low to moderately abrasive, sticky and heat sensitive materials. They are proven in a variety of industries worldwide, including but not limited to chemical, petrochemical, ceramic, pharmaceutical, food, fertilizer and plastics.

System overview

Flash drying can be simultaneously combined with other functions such as pulverizing, separating, classifying and conveying for utilization in additional process applications.

Cage mill flash dryers are designed to bring wet, lumpy, and dispersable products into contact with a high velocity hot gas stream. The agitation and turbulence created by the cage mill provides for effective deagglomeration, dispersal, and drying of the material. The technology is appropriate for applications involving fine or lump-filled friable material, low product temperature, surface moisture, and retention times for drying of a few seconds. With conditioning mixers, applications involving filter cakes, sludges, and slurries can also be handled.

Imp mill flash dryers are used when size reduction of the process material is required. The rotating high speed hammer mill provides for the grinding action that results in particle size reduction and assists in bringing internal moisture to the surface. Convection heat transfer is dominant, while conduction and radiation effects are minimal. The technology is particularly suited for applications involving lumpy or coarse material that is low to mildly abrasive, internal or unbound moisture, low temperature, and retention time for drying of a few seconds.



Raymond® Technical Services

Technical field service

Our staff of experienced field service engineers are available to assist with equipment commissioning, maintenance, and service of our entire product line.

Equipment inspection

An important factor in reducing maintenance costs and improving general performance is regular equipment inspections. A member of our technical service team will visit your site and conduct an in-depth mechanical inspection of your equipment or process evaluation of your system.

Operating seminars

Conducted at your facility, these training seminars have proven to be extremely valuable in aiding plant personnel to operate and maintain equipment more effectively resulting in reduced costs and downtime. For more information on seminars please contact our maintenance sales department.

Modification and upgrade packages

We have developed a number of improvements that can be installed in existing equipment in the field as conversion packages. We provide modification and upgrade packages for control systems, vertical shaft and roller mill journals.

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Raymond® OEM Replacement Parts

Since our customers prefer to order OEM replacement parts, we maintain a large inventory for immediate shipment. We stock most wear parts that include but are not limited to grinding rolls, bull rings, plow tips, liners, hammers, whizzer blades, mixer paddles and feed rolls, as well as bushings and bearings. We also stock many non-wear parts including journal heads and housings, complete journal assemblies, shafts, spiders, plow supports, gears and pinions.

Outstanding customer service and a commitment to ship parts on time, every time, is our top priority.

Raymond® Pilot Plant Test Facility

Raymond® pulverizing capabilities

- Raymond® Roller Mill
- Raymond® Imp™ Mill
- Raymond® Vertical Mill
- Raymond® Ultra Fine Mill
- Raymond® Bowl Mill

Raymond® particle size separation

- Raymond® Jet-Stream™ Classifier
- Raymond® Mechanical Air Separator
- Dynamic turbine classifiers for mills
- Screen tests

Bartlett-Snow™ and Raymond capabilities

- Bartlett-Snow™ High Temp Rotary Calciner
- Bartlett-Snow™ Rotary Dryer
- Bartlett-Snow™ Rotary Kilns
- Bartlett-Snow™ Rotary Cooler
- Raymond® Flash Drying System



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