RAYMOND® FINE GRINDING ROLLER MILL

As New or For Existing Equipment

With a 130 years of experience, Raymond is a leader in the design and manufacture of industrial milling equipment and has set the standard in size reduction.

The Raymond Fine Grinding Roller Mill (US Patent Nos. 7665681 and 7963471) is specially designed for achieving product size distribution with d_{50} measurements of less than 6 microns.

Available as new roller mills or as a retrofit to your existing mill.

Features include:

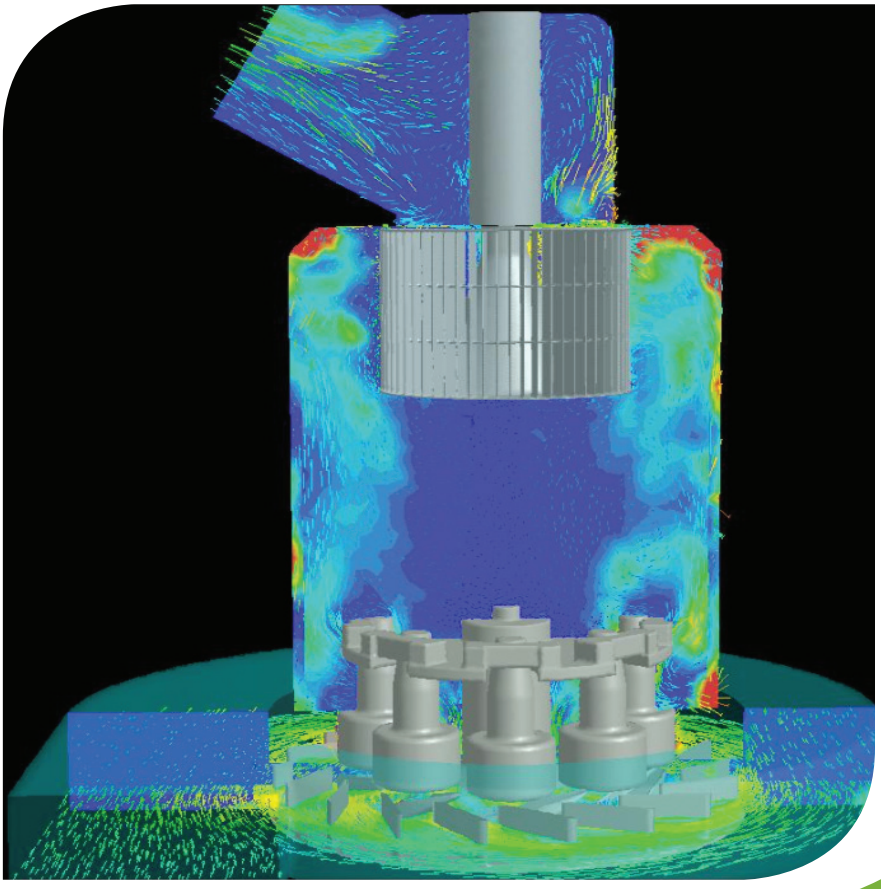
- Contoured grinding rolls and grinding ring;
- Mill side baffle;
- Optimized plow configuration to enhance mill performance for achieving the required product fineness.

Compared to a Conventional Roller (Pendulum) Mill:

- Achieves finer products;
- Increases production rate by 10-15% for products possessing d_{50} measurements of less than 10 microns;
- Smoother, quieter mill operation.

ADVANTAGES

- Fine grind d50<6 micron
- Low power consumption
- Low noise/vibration level
- High reliability and availability
- Stable and efficient performance
- Easy operation and system control
- Cost efficient retrofitting



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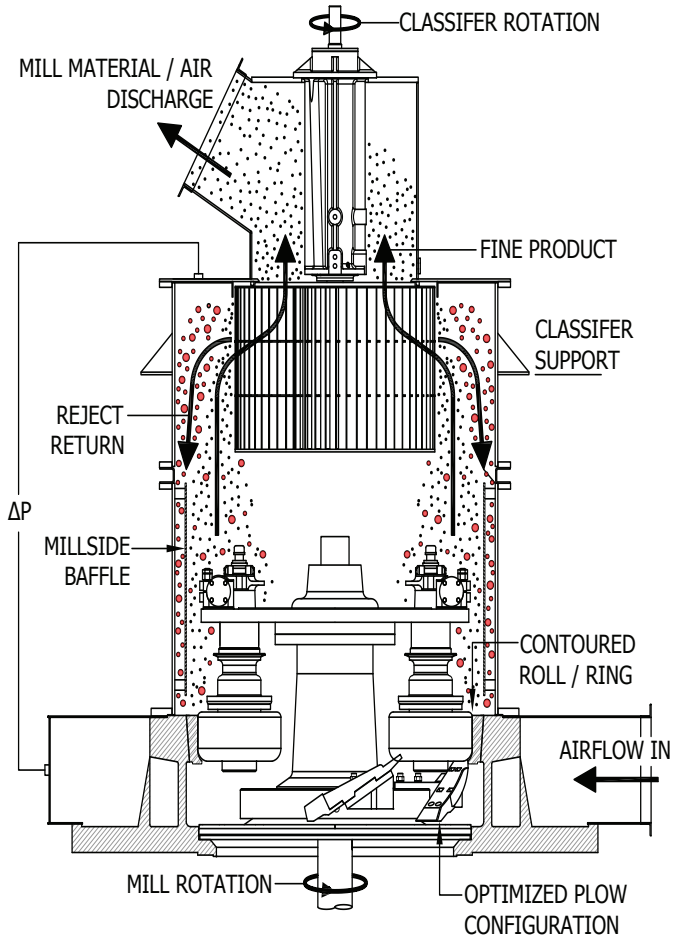
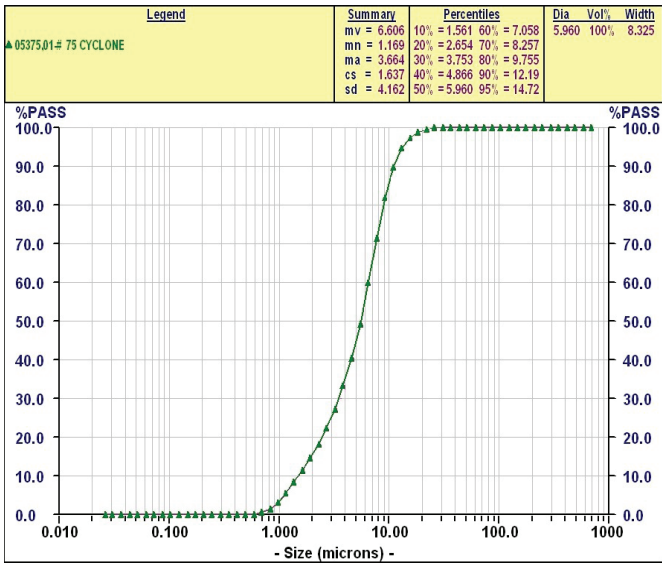
Principle of Operation

The Raymond Fine Grinding Roller Mill is an air swept vertical pendulum mill with integral classification. A vertical shaft rotates an assembly of grinding journals/rolls inside the grinding zone. As the unit turns, centrifugal force drives the rolls against the grinding ring. Feed material enters the mill from the top of the grinding zone and moves down to the mill bottom by gravity. It is then lifted up by plows from the mill bottom to the nip area of the grinding rolls and ring where the grinding occurs. The plows rotate about the center shaft together with the journals/rolls assembly. The ground material is discharged into the process airstream.

The airstream flows through nozzles beneath the bull-ring, carrying the pulverized material upward to the dynamic classifier where the coarse particles are separated and returned to the grinding zone, while acceptable material exits the mill to product collection in a cyclone or a baghouse.

With the conventional roller mill design, when fine grinding, the classifier tails (rejected particles) are also quite fine and can be easily entrained into the airstream. However, the fine grinding roller mill is designed with a separate path for the coarse reject material to travel back to the grinding zone in such a way that particle short circuiting is avoided.





Nominal Specifications for Fine Grinding Roller Mill

Mill Size		Airflow		Mill Power		Fan Power	
in	mm	ft³/min	m³/hr	hp	kW	hp	kW
30	760	3000	5000	25	20	20	15
50	1270	7700	13,000	70	50	50	35
54	1370	9700	16,500	90	65	60	45
60	1520	12,000	20,400	110	80	80	60
66	1670	17,300	29,400	160	120	110	85

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