BARTLETT SNOW™ ROTARY KILNS

With a 130 years of experience, Raymond Bartlett Snow thermal products have successfully provided solutions in heat transfer applications for industries worldwide.

For High Temperature Applications

Bartlett-Snow Rotary Kilns: Known for their high on-line availability and operational integrity for tough applications involving high temperatures, corrosive conditions and atmospheric control operations.

We offer an extensive range of systems, components and services to support the Bartlett-Snow product line. From initial pilot plant testing, equipment design and manufacture; to training, start-up and commissioning; maintenance assistance and supply of replacement parts, we are committed to meeting our client's needs.

Design Features
Bartlett-Snow Rotary Kilns are designed and manufactured with exacting standards to meet processing requirements for a variety of industries worldwide.

Direct-fired refractory lined kilns are provided for applications requiring material temperatures up to 3000°F (1600°C) and atmospheres that are oxidizing or slightly reducing. The units can be arranged for co-current or counter-current operation, with the counter-current arrangement most frequently utilized. In addition, the process material must tolerate contact with products of combustion and/or the burner flame envelope, as well as reflect a particle size range, specific gravity and shape permitting reasonable gas velocities through the cylinder. They are designed and shop fabricated in sizes ranging from 24" to 120" in cylinder diameter, and 12' to 160' in length.

TYPICAL MATERIAL PROCESSED

- Activated Carbon
- Alumina
- Aggregates
- Bauxite Clay
- Catalysts Carriers
- Calcium Carbonate
- Chromium Oxides
- Ferrites
- Kaolin Clay
- Ore Concentrates
- Petroleum Coke
- Silica Foundry Sand
- Titanium Dioxide
- Zicon Sand

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RAYMOND BARTLETT SNOW

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System Overview

The Bartlett-Snow Rotary Kiln design consists principally of a revolving refractory lined cylinder supported in two riding rings, each resting on two trunnion rolls. The cylinder is rotated by means of a girt gear and pinion drive arrangement.

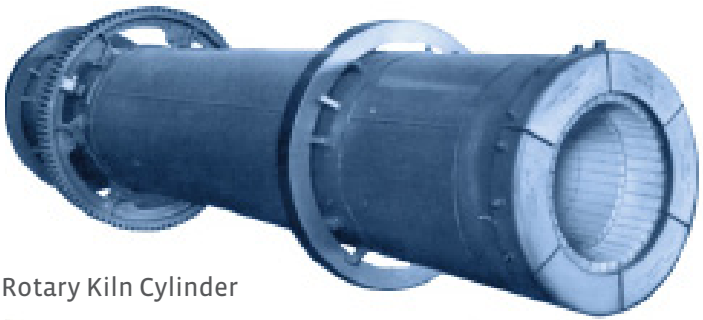
Although most kiln cylinders have the same diameter throughout the length, we can provide special kilns with enlarged firing ends to retain the processed material longer in the area of highest temperature, in order to meet unique processing requirements.

The time for material to pass through the kiln is controlled by the slope of the cylinder to the horizontal, the cylinder rotation rate and the velocity of the gases through the cylinder. The cylinder inparts a rolling and mixing action to the material which produces a homogenous end product.

Both ends of the cylinder are enclosed by stationary breechings with rotary seals as required for the application. The feed breeching is refractory lined and can utilize a feed chute or a variety of feeding mechanisms.

At the discharge end, the refractory lined firing hood is carriage mounted so that it can be rolled back to permit access to the cylinder interior.

Rotary kilns are provided with automatic temperature, pressure and electrical controls, with burner systems capable of firing natural gas, propane and/or oil.

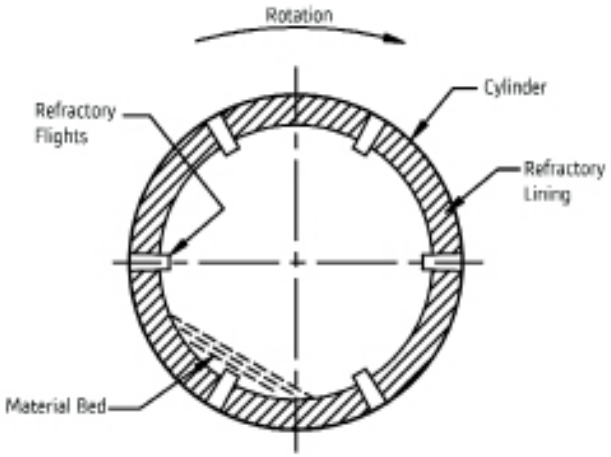


Rotary Kiln Cylinder

Retention Time Considerations

Retention Time: $T = (Kf*L) / (R \cdot D \cdot S)$
Where:

T = Retention time of material through the cylinder
K_f = Empirical factor determined by test work
R = Cylinder RPM
D - Diameter of cylinder
S = Slope of cylinder
L = Length of cylinder



Rotary Kiln with Internal Flights

RAYMOND BARTLETT SNOW
2151 Fisher Drive
Naperville, IL 60563 USA
Phone: +1 630 393 1000
Email: RBS@schenckprocess.com

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