

# Bartlett-Snow™

## Rotary Calciners for High Temperature Processing

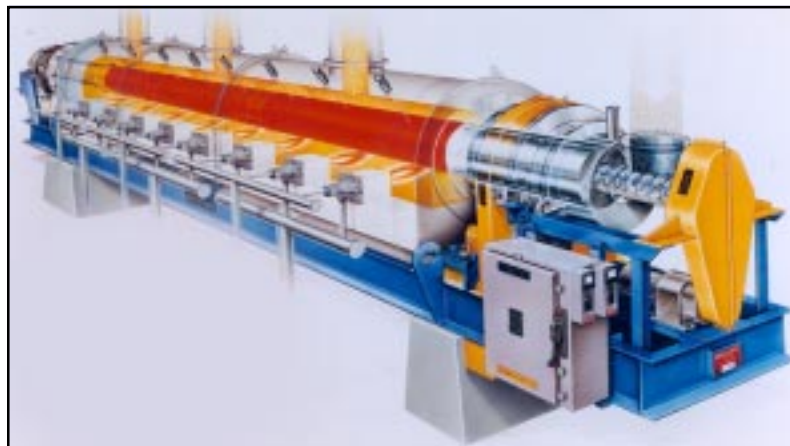
### Proven Equipment for Thermal Applications

Since 1885, Bartlett-Snow™ Rotary Calciners have provided a highly effective and cost efficient means for high temperature processing of various granular products and powders. Each Bartlett-Snow™ unit is specially designed to provide for controlled and uniform process conditions.

Material is fed into a rotating cylinder that is externally heated according to process related time versus temperature criteria. As the cylinder rotates, the material is gently tumbled as it flows from the feed end of the cylinder to the discharge end. This action promotes uniform exposure of the product to a defined environment. Various processes employ reaction gases in direct contact with the product to propagate a given reaction or cover gases to protect the product.

The benefits realized by users of Bartlett-Snow™ equipment compared to conventional tunnel kiln or mesh belt style equipment are as follows:

- **Maximum Product Uniformity**  
The material bed is constantly being turned over, all of it is exposed uniformly to its required environment.
- **Greater Yields**  
All of the material is processed; none is overheated or under heated.
- **Reduced Process Time Factors**  
Due to uniform exposure and dynamics of the product, process time requirements are drastically reduced.



Bartlett-Snow™ natural gas heated rotary calciner

- **Reduced Capital Costs**  
With reduced process time requirements, the equipment is smaller and therefore less costly.
- **Reduced Floor Space Requirement**  
Due to reduced process time factors, Bartlett-Snow™ Calciners require less floor space compared to other calcination equipment.
- **Reduced Energy Costs**  
Reduced process time factors result in reduced energy requirements.
- **Reduced Operating Costs**  
Material is inherently conveyed through a rotary calciner, thus eliminating the ongoing replacement cost of material holding containers and automation devices. Since the bed of material is constantly being turned over, solids to gas contact is optimized, minimizing process gas consumption and reducing the size of off-gas treatment systems.

#### Typical Materials Processed:

- Activated Carbon
- Catalysts,
- Ceramic Compounds
- Sludges
- Contaminated Soils
- Ferrites
- Manganese Dioxide
- Metallic Oxides
- Molybdenum Sulfide
- Rare Earths
- Titanium Oxide
- Tungsten Compounds
- Uranium Compounds
- Vanadium Compounds
- Zinc Oxides



**Air Preheater Company  
Raymond Operations**

## Typical Cylinder Capabilities

Maximum Operating Temperature	621°C (1150°)	815°C (1500°F)	982°C (1800°F)	1093°C (2000°F)	1370°C (2498°F)	1500°C (2732°F)	2000°C (3632°F)	Maximum Tube Diameter mm (in.)	Maximum Heated Length mm (ft.)
304 SS/316SS	X							3048 (120)	27432 (90)
309/310	X	X						3048 (120)	27432 (90)
330	X	X	X					3048 (120)	27432 (90)
Inconel	X	X	X	X				3048 (120)	27432 (90)
Quartz	X	X	X	X				609 (24)	6096 (20)
Alloy (proprietary)	X	X	X	X	X			457 (18)	2134 (7)
Mullite	X	X	X	X	X	X		203 (8)	2134 (7)
Alumina	X	X	X	X	X	X		203 (8)	1524 (5)
Silicon Carbide	X	X	X	X	X	X		356 (14)	2743 (9)
Graphite	X	X	X	X	X	X	X	457 (18)	3048 (10)

## Available Equipment Features

- Equipment Styles Available
  - Continuous
  - Batch
- Method of Heating (single/multiple zone)
  - Electric resistance
  - Natural gas
  - Propane
  - Oil
- Operating Atmosphere Capability
  - Inert
  - Oxidizing
  - Reducing
  - Steam
  - Pyrolyzing
- Cylinder Drives
  - Auxiliary backup drives
  - Chain drives
  - Gear drives
  - Tube rotation monitoring
  - Fixed and variable speed
- Available Components
  - Adjustable slope capability
  - Off-gas systems
  - Gas mixing panels
  - Heat recovery systems
  - Innovative equipment seals
  - Integral product cooling
  - Material metering equipment
  - PLC control systems
- Automatic Lubrication Systems
  - Bearings
  - Gears / Sprockets
  - Riding rings
  - Rolling components
  - Seals
- Available Services
  - Process development / size selection capability
  - Installation / Start-up
  - Operator training
  - Aftermarket parts and service



2000°C Bartlett-Snow™ rotary calciner

