

Bartlett-Snow™ Rotary Dryers

The Benchmark for Quality Thermal Process Equipment

Since 1885, Bartlett-Snow™ products have been the benchmark for quality thermal process equipment. Bartlett-Snow™ Rotary Dryers are engineered to assure reliable operation, enhanced efficiency, maximum availability, and facilitate maintenance. Units are simple to erect, easy to operate, and require minimal maintenance. These features help make Bartlett-Snow™ Rotary Dryers the smart choice for your process solids drying applications.

ALSTOM Power, Air Preheater Company, offers a complete range of systems, components and services to support our Bartlett-Snow™ product line. From initial laboratory scale test work, equipment design and manufacture; to training, start-up and commissioning; through long term maintenance assistance and supply of replacement parts, we are committed to meeting our clients needs.

Drawing on our technical expertise and a wealth of experience, we offer innovative solutions to our clients thermal processing requirements, solutions that are economical and environmentally friendly.

Design/Construction Features

Bartlett-Snow™ rotary dryers are designed and manufactured with exacting standards to meet processing requirements for industries worldwide. The capacities vary depending on the characteristics of the material, type and quantity of volatiles present, temperature requirements, and the type of dryer.



Field construction of Bartlett-Snow™ Rotary Dryer

Materials used for dryer construction vary based upon the unique process requirements. These materials include carbon steel, stainless steel, high grade alloys and composite cladding.

■ Bartlett-Snow™ direct heated rotary dryers are available in sizes ranging from 18" to 156" in diameter, with lengths from 10' to over 100'.

■ Bartlett-Snow™ indirect heated rotary dryers are available in sizes ranging from 6" to 120" in diameter, with lengths from 10' to over 100'.

Typical Materials Processed

- Alumina
- Activated Carbon
- Metallic Oxides
- Granulated Fertilizers
- Rare Earth Compounds
- Manganese Oxide
- Catalysts
- Food Products
- Titanium Dioxide
- Propants
- Coke
- Ferrites
- Clays
- Nuclear Materials
- Pigments



Air Preheater Company
Raymond Operations

Bartlett-Snow™ rotary dryers are offered in two basic designs, directly and indirectly heated. These designs are readily adaptable to a wide variety of processing applications and are offered as stand-alone units or as part of complete thermal processing systems. Specialty dryer designs, such as compartmentalized dryers, multiple pass dryers, and combination dryer-coolers, can be supplied to address unique applications.

Directly Heated Rotary Dryers

The directly heated dryer uses convective heat transfer, bringing hot drying gases into direct contact with the process material in the rotating cylinder. The hot gases can be provided most economically by tempering combustion products or hot waste gases with air to the temperature and volume required for the process. Combustion of a variety of fuels or waste gases can be accommodated by a standalone air heater or by a burner mounted at one end of the dryer. The wet process material is introduced into the rotating cylinder, where it is lifted by flights secured to the ID of the cylinder and showered through the hot



Twin rotary system for reclaiming aluminum scrap

gases. The dryer can be arranged so that the hot gases pass through the unit, either counter-current or co-current to the material flow. This flexibility allows the dryer to provide for the most efficient heat transfer and best product quality for a given process.

Indirectly Heated Rotary Dryers

The indirectly heated dryer utilizes radiation as the principal medium of heat transfer. Indirectly heated dryers are an excellent way to process solids that are easily entrained, need to be gently handled, or require special process atmospheres. The indirectly heated dryer design features a rotating cylinder housed along its active length in an insulation lined casing or furnace. Hot products of combustion or waste gases are introduced at one or several points along the length of the casing and are circulated around the cylinder. Radiation from the cylinder heats the material, driving off moisture and other volatiles. Because the process material is segregated from the heating gases, the material can be blanketed with necessary process gases to provide inert, oxidizing, or reducing environments within the cylinder. Proprietary Bartlett-Snow™ seal technology lends itself to gas tight operation for such processes.

Engineered Systems

For applications such as drying wood chips, fibers, or plastic pellets, custom internal hardware is designed into the dryer to maximize retention time and drying efficiency. When the process material cannot come in contact with an open flame or with products of combustion due to heat sensitivity or product purity concerns, a heat exchanger or banks of steam coils are used to heat filtered air, or other process gas, to the required inlet temperature.



Indirect rotary dryer for processing carbon black

We design complete systems that integrate the rotary dryer with other process equipment to address unique material processing requirements. For example, when removing volatile organic compounds (VOC's) such as cutting oils or solvents from process materials, vent gas recirculation, a thermal oxidizer, and air pollution controls are engineered into the drying system design. The package is designed to account for the flammability of the vapors, for destruction of the VOC's, and for cleaning of the exhaust gases prior to venting to the atmosphere.

Alstom Power, Air Preheater also offers the following services:

- pilot plant material testing
- replacement parts
- field service support

Contact your local Alstom Power, Air Preheater, Bartlett-Snow™ representative for further information.

