

# **BLISS** ROBINSON SYSTEMS

## blissful NEWS letter

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## Still Pioneering After All These Years!!!

Over eleven years ago, Bliss Industries set out to improve the cost effectiveness of the hammermill. Although we have received many compliments from you and other customers, we feel improvements can still be made, especially in certain, more difficult application areas. Later in this newsletter we will introduce you to some of these improvements, and will relate some actual case histories.

As you know, we take pride in the fact that Bliss Industries listens to its customers. As a result of many of your complaints concerning your pelleting equipment, Bliss Industries has also decided to improve the "State of the Art" in pelleting. Our first step in this direction was to associate ourselves with Robinson Milling Systems.

Robinson Milling Systems is a European company who developed a new pellet mill design in the mid-1970's, with the first production model being installed in 1976. Since that time, their machine has become a dominant force throughout Europe and the world. In fact, in the short time between the installation of that first machine and today, there are well over a thousand of these machines in use around the world.

Working with Robinson we have "Americanized" the design so that we can build them right here in America, at our factory in Ponca City, Oklahoma. In fact, our first two machines, marketed under the *Pioneer* name, are installed at Princeton, Missouri. They are a part of a new feed mill being built for Premium Standard Farms, an integrated swine producer. Expected start up date for this plant is sometime in late August. We will share more about these machines, and the other Bliss equipment installed there, at a later date.

Also as a result of our association with Robinson Milling, we are currently supplying the industry with pellet coolers. Beginning in February of this year, we have already supplied eight of these units to various feed and pet food manufacturers within the Midwest. Some of our success stories will be shared with you in this newsletter.

Bliss Industries prides itself upon being a leader in bringing new technology to the industry. However, we have always felt that our position is as a member on YOUR team. Without customers, no matter how great a product, there is no future for anyone. YOU are the quarterback. Please continue to provide us with guidance on how best to serve you today and in the future.

Sincerely,

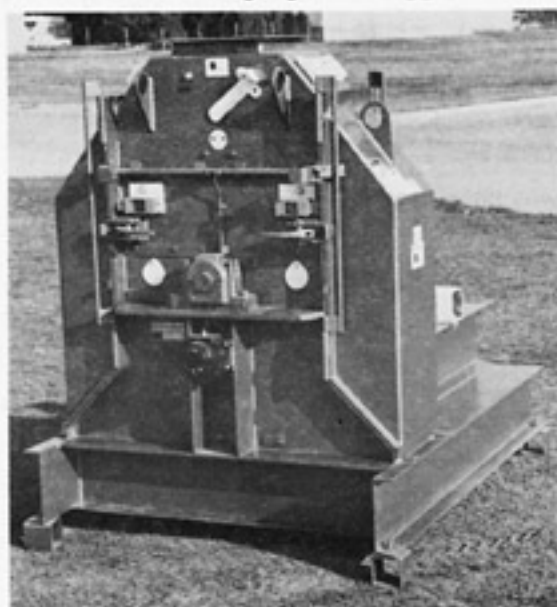


## New Hammermill

Many applications deal with high fat products, or with products which do not flow freely. In order to increase the capacity in these applications, a new design of Bliss Hammermill was created. It is called our **RELIEF** Hammermill and is easily identified by the grinding chamber door.

Free-flowing materials require a door configured to more closely follow the shape of the rotor. "Sticky" products require a different approach because the ground product will tend to build up on the bottom slope of the door, restricting air flow to the mill.

The **RELIEF** Hammermill uses a door which follows the contour of the rotor on the upper body, but has straight sides on the lower part of the door. Removing the inward sloping surface of the standard door, eliminates a surface where ground product may accumulate and insures proper air supply to the screen.



## 100 Tons per Hour on Meat & Bone Meal

Having a problem reaching the desired capacity of properly ground meat and bone meal, Mid-South Milling of Memphis, Tennessee, recently purchased a 600 horsepower Bliss Hammermill. Currently being installed, they intend to consistently produce 100 tons per hour.

## 500 Horsepower Yields 90 Tons per Hour!!!

Integrated poultry operations require a large volume of ground corn. When OK Industries, based in Fort Smith, Arkansas, was looking to increase their capacity, they looked to Bliss Industries.

Their requirement led us to develop a unit which incorporates two grinding chambers but a common mainshaft. Rather than use a single, large horsepower motor, our design uses two 250 horsepower motors, one on each end of the mainshaft.

This arrangement has worked so well that they routinely produce over 90 tons per hour of ground corn. This capacity also comes while using a 1/8" screen!!!

Dual grinding chambers are available on both our standard and **RELIEF** Hammermills.

## Bunge Corporation Purchases 12 Units in 1992

Bliss Industries is pleased to report that Bunge Corporation selected their hammermill as the system of choice for their aggressive capital improvements during 1992. These units are being delivered at various times during this year, to match with the installation requirements of Bunge.

## 90 Tons per Hour on Soybean Meal

When Cargill's soybean processing plant at Iowa Falls, Iowa, was looking for ways to improve its product, they selected a Bliss Model IED-3848-TF. Using only a single 200 horsepower motor, this unit consistently processes 90 tons per hour.

## Bliss Pellet Mills???

Yes, Bliss makes pellet mills. And, as you would expect, they are not your ordinary gear box design. Using two drive motors, powering the die through a dual stage, belt drive transmission, these pellet mills provide nearly vibration-free operation.

On a recent trip to Europe to see Robinson equipment in operation, Bill Bliss checked for vibration in an operating, 300 horsepower pellet mill by standing a coin, on edge, on top of the pellet mill door!!! As Bill commented then, this is a good indication that very little energy is wasted "shaking the machine". Less vibration always translates into more energy used in the primary function of any machine.

The dual stage, belt transmission also provides an advantage over the traditional gear box. Since there are NO gears, and only six bearings, between the main drive motors and the spinning die, there is less energy lost between the motors and the die. Further, the dual stage, belt transmission allows NO energy to be wasted on belt slippage.

Standard V-belts are used between each drive motor and its pinion shaft. In turn, the pinion shaft powers the die through a high strength, gear toothed belt. NO slippage can occur with the geared belt, and a built-in speed sensor will detect any V-belt slippage, stopping the machine if slippage does occur. Further, each *Pioneer* pellet mill is equipped with a hydraulic system which maintains proper tension on these V-belts.

Since the pinion shafts which power the die are located on the horizontal center line of the mainshaft, there is NO side loading of the mainshaft bearings. And, with three rolls supplied as standard, the die literally "floats" on the mainshaft. No side loading of the bearings can occur due to improperly adjusting a single roller.

All these features, and more, make the *Pioneer* pellet mill such a revolutionary machine. You can plainly see why we are so proud to offer it.

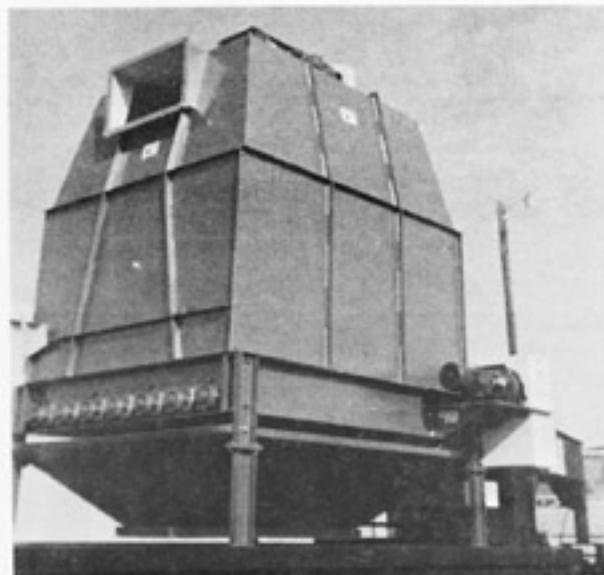
The Bliss Robinson *Pioneer* is available in sizes ranging from 80 horsepower to 400 horsepower, with a larger unit now under development. All units will be made in, and supported from, Ponca City, Oklahoma

## Bliss Lab Expands to Include Pellet Mill

To prove its commitment to the pelleting industry, Bliss Industries has recently installed a complete pelleting line within its laboratory. This will give us the ability to not only test grinding capacity on various products, but also to see how well various products will pellet.

In keeping with our preference for belt driven pellet mills, we have installed a 10 horsepower unit with an 8" inside diameter die. Conditioning can be accomplished with either steam, or hot water.

Cooling will be provided by a miniaturized version of our Bin Cooler.



## Pellet Coolers

Adopting the form of a counter flow cooler, Bliss Robinson has created a Bin Cooler which can be used with a wide range of pellet sizes. Capacities range from 1 to 60 tons per hour.

The Bin Cooler gets its name from its shape. It looks like a square or rectangular bin, with an inlet on top and a discharge mechanism on the bottom. All cooling air enters the unit from the bottom, is drawn upwards through the pellets and exits through the exhaust located at the top. All pellets enter through an air lock at the top of the cooler and exit through the bottom.

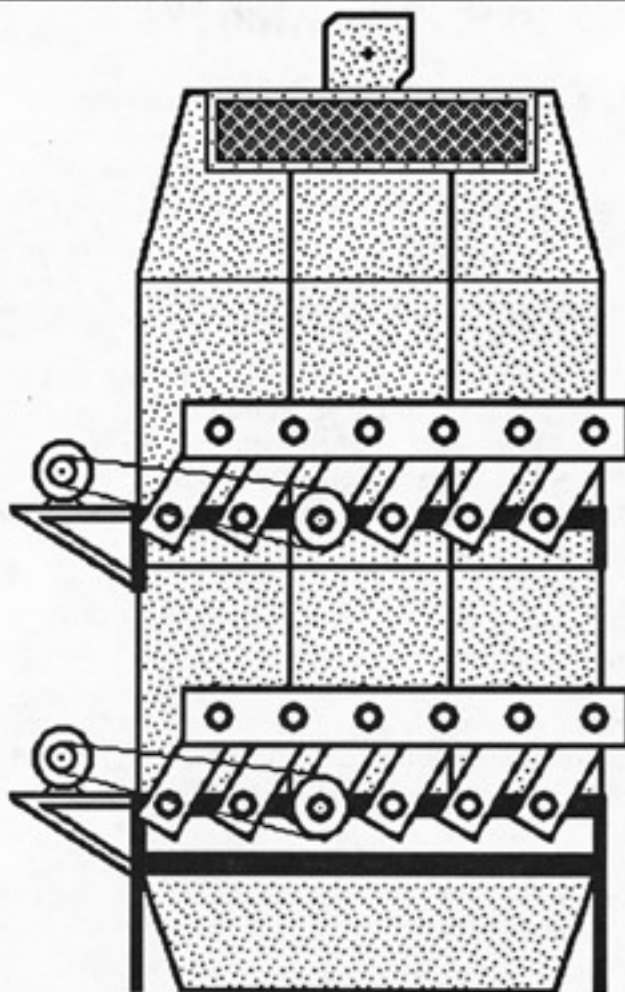
**Pellet Coolers (continued):**

Since the cooling air flows "counter" to that of the pellets, the coolest air is at the bottom of the cooler, and the warmest at the top. This temperature gradient matches that of the pellets as they cool, and promotes better "curing" of the pellets. It also makes the Bin Cooler an excellent choice for "Fat-at-the-Die" applications.

### **New Double Deck Bin Coolers Give Added Capacity**

Where a single deck Bin Cooler is great for capacities up to 30 tons per hour, it simply cannot handle the larger capacities required by some of our customers. Therefore, the Bliss Robinson Double Deck series was created.

This configuration stacks two coolers on top of one another, with the advantage that the lower unit has a much more even "fill pattern" than a single deck Bin Cooler. This allows more product to be evenly distributed upon the lower level. This more level flow contributes to the high efficiency of this design, and makes it an excellent choice for high capacity situations.



Double Deck Bin Cooler