

### **GRINDING** APPLICATION

#### **Benefits:**

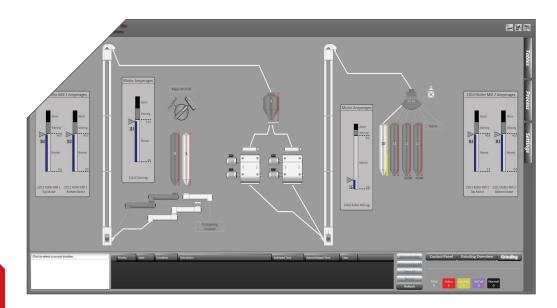
- · Higher accuracy and superior product
- · Automatic adjustment of Grinders to meet particle size requirement
- Reduced waste and contamination
- Runs Grinders automatically to keep destination ingredient bins full

## **Typical Features:**

- Easily set Mill Type, Grinding Rate, Loss Factor, Source / **Destination Ingredients**
- Automatic scheduling and transfer of materials
- Maximizes throughput by running grinding mills to the most efficient load
- Grinds whole ingredients and routes them to the correct bins, with little or no attention from an operator
- Tracks maintenance minder data; hours, tons of usage
- Mill monitors integrated into Feedmill automation system
- Blend multiple Source ingredients to produce a single ground Destination ingredient

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# **GRINDING** FEEDMILL AUTOMATION



Feedmill automation can simplify operation and improve efficiency of cost and throughput. Sterling Systems & Controls, Inc. custom designs and manufactures the highest quality automation control systems for virtually any Feedmill process or a complete facility.

Sterling Systems & Controls designs and provides equipment and software for custom systems using Allen-Bradley PLC's and desktop PC's running Sterling Systems' customized Windows-based Automation Software.

Sterling's forty-five plus (45+) years of Feedmill process and Feedmill automation experience ensures quality and efficiency in both hardware and software.

### GRINDING

The Grinding process increases efficiency and improves conditioning in a feed production operation. Grinding performs particle size reduction for further processing of the material. Grinding creates more surface area which aids in digestion of the feed. In the grinding process fracturing of the solid material occurs, resulting in both an increase in material surface area and dissipation of heat.

Whether you use a roller mill, hammermill or something else in your process, Sterling Systems & Controls, Inc. automation and process control systems can automatically optimize its operation within the overall feed production process and automation system to meet a specific size requirement; adjusting the gaps in roller mills to meet a specific micron size. This also includes setting or programming Mill Type, Grinding Rate, Loss Factor and Source/ Destination Ingredient, along with providing feeder speed control based

on the type of material, type of grinding mill, and the transfer of the material to the next part of your feed production process.

With the scheduling of the Grinding process, the automation system controls receiving and programs the grinding function, providing an accurate, schedule-driven automatic process with very little or no manual intervention. Superior scheduling and control allows your Feedmill to generate higher process efficiencies, eliminate more waste and contamination issues, while delivering improved accuracy and superior product.

### **KEY BENEFITS**

HIGHER ACCURACY & SUPERIOR PRODUCT: Automatic optimization of your Grinders to meet your specified particle size; manage grinding rate, loss factor and mill functionality to produce a superior ground product with a greater level of accuracy of the ground ingredient.

REDUCED WASTE AND
CONTAMINATION: With automatic scheduling and control of your particle reduction process the Grinding application automatically adjusts Grinders to work accurately and quickly, reducing waste and contamination.

RUN AUTOMATICALLY - KEEP GROUND BINS FULL: Automated scheduling of grinding and transfer processes ensures destination ingredient bins remain full.

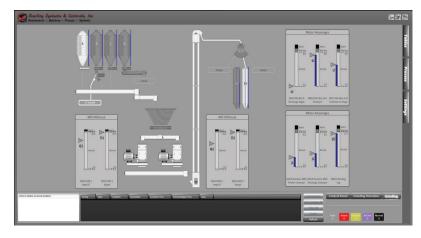


Figure 1: Graphic display of Grinding in Feedmill, mill diagnostics; Classifiers

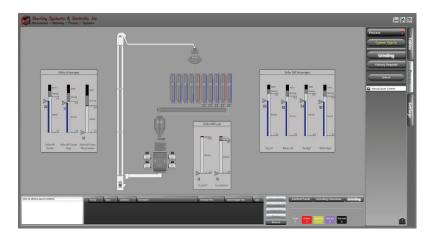


Figure 2: Graphic display of Grinding in Feedmill, mill diagnostics; Roller Mills



Figure 3: Grinding mill monitors; vibration, temperature tied into automation system

