APPLICATION SUMMARY:

Blending fragrance into powders is a common operation in the manufacture of cosmetics, personal care and home products. Rapid and thorough mixing in a well-designed Ribbon Blender is an ideal method for preparing scented deodorant powders, dusting powders, baby powders, make-up, dry shampoo, room fresheners, detergents and other similar applications.

RECOMMENDED BLENDING EQUIPMENT FOR

Scented Powders

Ross Ribbon Blenders

Ross Ribbon Blenders are well-proven for mixing small amounts of liquid fragrance into bulk powders and achieving a highly uniform composition. Dry ingredients are loaded into the blender’s U-shaped trough and turned over by a horizontal double ribbon agitator as the liquid component is atomized and sprayed onto the batch. A full load usually corresponds to a product level around the outer ribbon’s tip, allowing enough headroom for the materials to be vigorously agitated.

The precise pitch of the inner and outer ribbons produce a well-balanced axial and radial flow pattern, promoting fast mixing and thorough coating. Maximum tip speeds around 300 ft/min are typical but with variable speed control, the blending action can be fine-tuned and optimized according to the characteristics of a particular recipe. In addition to agitator speed, the rate of liquid addition is a critical parameter that must be determined for each unique formulation. A metering pump may be used to feed the fragrance at a controlled rate, or the spray bar may be connected to a pressure vessel. Powder blends that tend to form lumps upon contact with liquid benefit from the ribbons’ aggressive multi-directional mixing mechanism. Supplemental high speed choppers may also be installed, as needed.

Ross Ribbon Blenders are fabricated to close tolerances for accurate mixing. Clearances between the agitator and the trough surfaces typically fall within the 1/8” to 3/16” range. This enhances mixing performance by preventing powders from stagnating in any part of the blender.
Advantages of Ross Ribbon Blenders:

- Direct drive design is standard on all Ross Ribbon Blenders. Unlike belt-driven blenders which are noisy and prone to slippage, direct-driven Ribbon Blenders are more reliable and require less maintenance. The cost-effective and space-saving combination of a gearmotor (one-piece motor reducer) and a variable frequency inverter delivers electronic speed control, soft-start capability and overload protection.
- Interior stainless steel surfaces are polished and each weld is “radiused” for easy cleanability. In addition to tightly-controlled clearances between the agitator and trough, end wall scrapers can be supplied for highly sensitive applications to further prevent “dead zones” where product can collect.
- Different duty models are available for accurate sizing according to average bulk density. Many standard capacities are offered from ½ to 1,000 cu.ft.
- Ross Ribbon Blenders can be customized to incorporate pneumatically-operated covers and discharge valves, bag dump stations, custom ports, liquid spray bar, load cells, high speed choppers, rotary CIP spray balls, PLC recipe systems and other accessories to help ensure streamlined ingredient transfers, efficient discharge and fast changeovers.

Other Applications of Ross Ribbon Blenders:

- Advanced Ceramics
- Animal Feeds
- Baking Pre-mixes
- Chemicals
- Coffee Beans
- Cosmetic Powders
- Dental Powders
- Detergents
- Drink Mixes
- Flavorings
- Glass
- Metal Powders
- Pesticides
- Pharmaceuticals
- Polymers
- Refractory Powders
- Soups
- Spices
- Sugars and Sweeteners
- Trail Mix Snacks
- Vitamin Supplements

For more information on Ross Ribbon Blenders

Visit www.ribbonblenders.com or click here to download a brochure.