APPLICATION SUMMARY:

Guacamole is a sauce made from avocado typically mixed with tomato, onion, garlic, lime juice, chili, cilantro and other herbs. Eaten as a dip or salad dressing, guacamole is best served immediately after preparation because enzymes in the avocado react with oxygen in the air causing the flesh to turn brown soon after it is cut and peeled. Commercially prepared guacamole thus requires fast mixing to overcome this issue prior to packaging. As described in this bulletin, ribbon blending is an ideal method for producing bulk quantities of fresh guacamole recipes.

Ross Ribbon Blenders

The versatile Ross Ribbon Blender is widely used throughout the food industry and one of its many proven applications is guacamole processing. Ingredients including peeled avocado halves, diced tomatoes, onions, herbs, salt, powdered flavors and other seasonings are loaded into the U-shaped trough and mixed by a horizontal solid-shaft agitator consisting of inner and outer helical ribbons. The position and precise pitch of each ribbon produce a well-balanced axial and radial flow pattern, promoting fast mixing of the different components despite differences in shape, size and density.

Maximum tip speed of the ribbon agitator is normally around 300 ft/min but with variable speed control, the blending action can be fine-tuned according to the characteristics of the product. Electronic speed control is especially useful in guacamole production because it is important to achieve uniform taste, appearance and consistency without over-mixing the batch. A similar application is blending boiled eggs with mayonnaise, mustard, salt, pepper and other spices to make egg salad for sandwiches. The Ribbon Blender imparts not only thorough blending but also controlled size reduction so the desired texture is achieved even in very delicate recipes.

In addition to speed control, vacuum conditions help improve guacamole processing in a Ribbon Blender. Removing air from the head space of the vessel delays oxidation of the avocado flesh resulting in a fresher taste and color. Preservative-free guacamole recipes are packaged right after mixing then pasteurized under high pressure to produce a shelf-stable finished product.
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 combination of a gearmotor (one-piece motor reducer) and variable frequency inverter enables electronic speed control, soft-start capability and overload protection.

- Certified by the Baking Industry Sanitation Standards Committee (BISSC).

- 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 product from collecting in certain areas.

- Different duty models are available for accurate sizing according to average bulk density. Standard capacities range 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, safety grating, spray bar assembly, load cells, PLC recipe systems and other accessories to help ensure streamlined ingredient transfers, efficient discharge and fast changeovers.

Typical Sanitary Applications of Ross Ribbon Blenders:

- Baking Pre-Mixes
- Coffee Beans
- Dental Powders
- Drink Mixes
- Dry Ingredients for Desserts
- Flavorings
- Flour Blends
- Pet Food
- Pharmaceuticals
- Sandwich Salads
- Seasonings
- Snack Bars
- Soups
- Spices
- Sugars & Sweeteners
- Trail Mixes
- Vitamin Supplements
- Whey Protein

For more information on Ross Ribbon Blenders

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