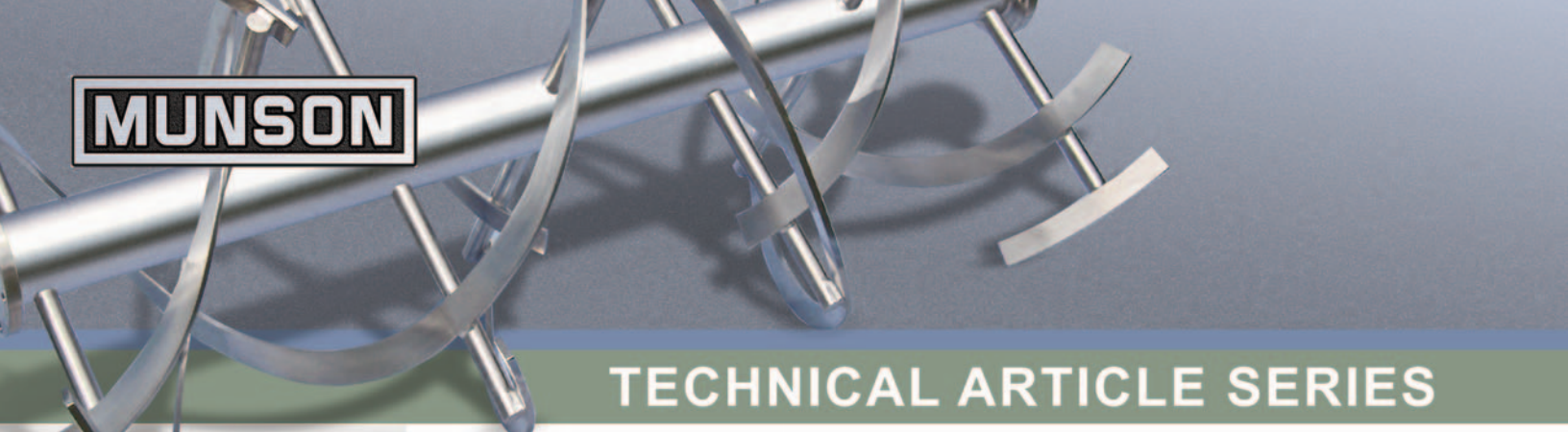


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Al Dentes' Provisions

Ribbon Blender Keeps Essential Oils of Spices Intact

Munson Machinery Co., Inc.
PO Box 855
210 Seward Ave.
Utica, NY 13502 USA
Tel: 1-800-944-6644
(In NY: 1-315-797-0090)
Fax: 315-797-5582
info@munsonmachinery.com

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Ribbon Blender Keeps Essential Oils of Spices Intact

LAS VEGAS, NEVADA — Paul Murphy, a Culinary Institute of America graduate who has worked with notable chefs across the U.S., turned his attention to custom spice blends and opened Al Dentes' Provisions. Initially focused on custom seasoning for chefs in the Las Vegas area, Al Dentes' has since become the largest supplier of dried spices, herbs, and seasonings in the Las Vegas metro area and has branched out to Hawaii and the western United States with custom and private label products.

Las Vegas accounts for approximately 65 percent of Al Dentes' business. In all, Al Dentes' uses 175 different ingredients — dried, granulated and powdered ingredients along with liquid and encapsulated oils — to create 80 to 100 custom blends.

"Chefs come to us with a particular flavor profile; we conduct R&D and create a spice blend to meet their needs," explains Matthew McClure, Al Dentes' general manager. "We can also take any existing blend and adjust it to suit a chef's liking or convert a blend to purer raw materials. Because of the volume of spices we use, we can also convert raw materials to ones with better price points," he adds.

Proper mixing of each spice blend is critical to Al Dentes' success. "We tried a few blenders, but found that they would physically puncture the cells of the spices, allowing the oil to seep out, resulting in loss of the blend's flavor and aroma — the essence of the spice," explains McClure.

In the end, Al Dentes' purchased a Munson Model HD-2-1/2-5-SS Horizontal Ribbon Blender with a capacity of 25 cu ft (0.71 cu m). "We selected the ribbon blender from Munson because it allows for a nice, almost folding action," says McClure. "In the end, we achieve a fully incorporated, homogenous mix that is loose and almost fluffy — exactly we want in our seasonings."



The ribbon blender's split double helical agitator, with 2:1 length-to-diameter ratio, promotes thorough mixing of ingredients. All surfaces contacting ingredients are constructed of #304 stainless steel.





Bulk density variation demands versatility

The Munson blender is now used for all of Al Dentes' seasoning blends, with three to eight batches run each day.

Ingredients are delivered manually to the blender via totes. Staging and weighing takes approximately 30 minutes; blending time is generally an hour regardless of batch size, says McClure. Once blended, the mix is discharged via a manually activated paddle gate into a tote.

Bulk densities at Al Dentes' run from one extreme to the other, according to McClure. "We have very heavy, granulated elements like salt, sugar, and garlic, which we typically run in 800 lb (363 kg) batches," he says. "On the other extreme is an herb blend like our Italian seasoning, which includes a mixture of light, fluffy dried herbs. With this mix, a batch of equivalent volume would weigh only 200 lb

(91 kg)."

Regardless of bulk density or type of material, the blender's split double helical agitator with its 2:1 length-to-diameter ratio promotes thorough mixing of all ingredients during loading, blending, and discharge. Powered by a 10 hp (7.5 kw) motor with a shaft-mounted drive, the agitator is flange mounted for easy access and cleanability.

Easy cleaning improves efficiency

Tight tolerances of 1/16 to 1/32 in. (1.6 to 0.8 mm) between ribbon blades and blender trough minimize the amount of residual product in the machine after discharge, which is a big advantage to cleanout.

"To be more efficient, we try to stagger the blends during a given day, so that the next blend has all of the components of the previous blend," he adds. "For example, we make a BBQ blend that contains chili powder. We'll first run a batch of chili powder through the blender, after which we dry brush out of the machine. Then we can go straight into the BBQ blend."

All surfaces that contact spice ingredients are constructed of #304 stainless steel, allowing thorough cleaning between batches. The blending trough is a one-piece welded unit, with no need for cross trusses to support sidewalls. Internal welds are polished from 150 to 240 grit and have a minimum 1/4 in. (6.4 mm) radius to eliminate corners, cracks and crevices that could entrap material.

Consistent product with maintenance-free blending

The HD-series blender is designed to handle both free-flowing materials and non-free-flowing products that are oily or pasty.

"Heavily powdered blends create some of our biggest mixing challenges," says McClure. "Highly pulverized powder can become sticky with heat, and if you add an oil, which we use as a carrier for flavor, things get tricky." One of the ways Al Dentes' has addressed this is to make a pre-batch that combines the liquid oil with a granular ingredient. "We then add the granular mix to the powdered ingredients to avoid any clumping," explains McClure.

"Consistency is key to the blender," says McClure. "We need to make sure our blends are consistent from batch to batch." That's not been a problem for the Munson blender. "It's very well-built and virtually maintenance free," says McClure.



Operator weighs, measures, and loads individual spices into the Munson HE-2-1/2-5-SS ribbon blender to create one of Al Dentes' many custom seasoning blends.







Discharging from the Munson blender is a homogenously mixed spice blend that is consistent from batch to batch despite varying bulk densities.



A palette of spices includes (clockwise from top left) turmeric, black pepper, cayenne, cinnamon, nutmeg, paprika, parsley, pink peppercorn, white pepper, and arrowroot in center.