

Comparison FPB & DRB



**AMERICAN
PROCESS SYSTEMS**
EIRICH GROUP



How to select the right style blender



Fluidizing Paddle Blender

25-100% fill level for efficient blending.

Approx. 1-2 minutes for dry applications.

The FPB effectively blends a wide distribution of particle size, shape, and density without segregation.

The mechanical fluidization creates space between the particles to allow them to move past one another, which efficiently achieves homogeneity.

Minimal. Reduced product degradation. If shear or friability is required, choppers can be used.

The mechanical fluidization mix action brings material to the surface more frequently and provides a fast and uniform way to apply liquid to powder.

$\leq 0.5\%$ standard deviation and $\leq 5\%$ coefficient of variation with 0.25 lb sample.

Random location.

Factors to Consider

Batch size flexibility

Mix time

Product characteristics
(shape, size, density)

High angle of repose

Shear/heat (friability)

Liquid addition

Mix quality

Filling/Loading

Ribbon Blender

60-100% fill level for efficient blending.

Approx. 5-6 minutes for dry applications.

Extended blending times are required to blend ingredients with particle size, shape, and density. Segregation may occur.

Requires additional blending time to achieve homogeneity. Charge minor ingredients in the center of the blender to minimize cycle times.

Moderate.

Requires additional blending time to apply liquids to a powder without creating agglomerates. Shear can disperse agglomerates if created during the liquid addition.

5% standard deviation and 10% coefficient of variation is common with 0.5 lb sample.

Recommended as close to center as possible.

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The Pioneer in Material Processing®



How to select the right style blender



Fluidizing Paddle Blender

Recommended. Pieces of solid fat or lard to remain in chunks. Minimal shear.

Recommended. Breadcrumbs, flour, salt, and other minor ingredients means various particle size, shape, and density. High angle of repose. Minimal shear.

Recommended. Maintains integrity of the bean. Minimal shear and less attrition.

Recommended with choppers if the blender is used for various products.

Recommended. Many ingredients of various particle size and density. Minimal shear.

Recommended. High variation in particle size, shape, and density. Friable products like parsley and coarse salt. Minimal shear and heat.

Recommended. Must keep nuts, dried fruit, and chocolate pieces intact. Minimal shear and breakage. Smaller batches better.

Application Examples

Biscuit mix

Breading mix

Coffee beans
(green or roasted)

Flavored drink mix

Pancake mix

Protein drink mix

Seasoning/spice blend

Trail mix

Ribbon Blender

Recommended. Shear helps disperse the powders and get a very homogeneous blend of sugar, flavor, and colorant. Shear needed.

Recommended. Very even dispersion of the fat and a smooth blend. Shear needed.

Recommended only if a thick liquid is plated onto the product (e.g., oil resin onto salt). Shear is important to get thick liquid dispersed.