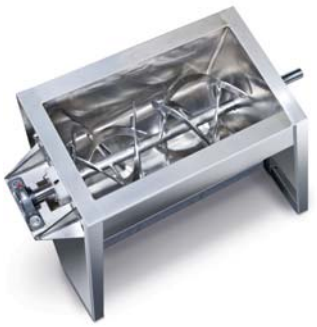
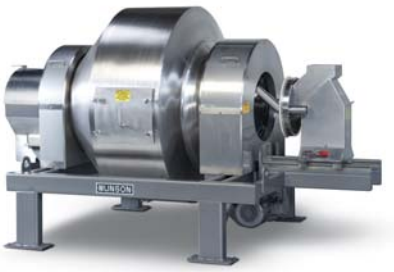
RIBBON/PADDLE/PLOW BLENDERS



With 50 years experience manufacturing Ribbon, Paddle and Plow Blenders for every industry and bulk material imaginable, Munson can solve your specific problem with unmatched efficiency. Choose from basic, low cost industrial units to state-of-the-art designs of 304/316 stainless and exotic alloys with heating/cooling jackets, liquid spray additions, high-speed choppers/ intensifiers, and finishes to USDA, 3-A Dairy and other standards. Extreme vessel rigidity allows extremely close agitator-to-vessel wall tolerances, resulting in a minimum "heal" of residual following discharge. Heavy- and extra-heavy-duty batch and continuous models in capacities from 1 to 1000 cu ft (.03 to 28 cu m).

ROTARY BATCH MIXERS



Gently blends batches of ingredients in parts down to one per million with 100% uniformity in less than three minutes, regardless of disparities in bulk densities, particle sizes or flow characteristics. Rotating drum with proprietary mixing flights tumbles, turns and folds material, imparting minimal energy, and elevates the batch for 100% discharge with no separation. Blends with equal efficiency from 5% to 100% of rated capacities of 5 to 600 cu ft (0.14 to 17 cu m). Sanitizes rapidly with no tools. Available to industrial, 3-A and USDA standards, with CIP nozzles and spray line for liquid additions.

MUNSON FORBERG MIXERS

Unlike Ribbon and Paddle blenders with a single agitator shaft, the Munson Forberg mixer features two counter rotating shafts with multiple, overlapping agitation paddles creating a mechanical fluidizing zone along the centerline of the mixer. Airborne individual particles are distributed rapidly throughout the batch, achieving a homogeneous blend in 10 seconds to two minutes. Low shear forces minimize friction with little or no degradation and with insignificant heat generation of <0.6°F (1°C). Large discharge doors provide rapid discharge with no segregation and little residual for easy cleaning. Capacities from 265 to 28,660 lb (120 to 13,000 kg).

COMPARE

SIX BULK BLENDERS AGAINST YOUR SPECIFIC NEEDS

Excellent · Good · Fair · Poor

The ratings below are generalizations that do not apply to all applications. Please consult factory for specific equipment recommendations.

	BATCH			CONTINUOUS			
MATERIAL REQUIREMENTS							
Abrasive Materials	Fair	Excellent	Poor	Poor	Excellent	Fair	Abrasive Materials
Brittle Materials	Poor	Excellent	Good	Poor	Excellent	Poor	Brittle Materials
Chips	Fair	Excellent	Good	Poor	Excellent	Fair	Chips
Crystals	Fair	Excellent	Good	Fair	Excellent	Fair	Crystals
Emulsions	Good	Fair	Poor	Good	Fair	Excellent	Emulsions
Fibrous Materials	Good	Good	Poor	Good	Good	Good	Fibrous Materials
Fragile Materials	Poor	Excellent	Good	Poor	Excellent	Poor	Fragile Materials
Glass Cullet	Fair	Excellent	Poor	Poor	Good	Poor	Glass Cullet
Large Variance In Particle Sizes	Poor	Excellent	Poor	Good	Excellent	Fair	Large Variance In Particle Sizes
Pastes	Good	Poor	Poor	Good	Poor	Good	Pastes
Pellets	Fair	Excellent	Good	Good	Excellent	Poor	Pellets
Powders	Good	Excellent	Good	Excellent	Excellent	Good	Powders
Slurries	Good	Poor	Poor	Good	Poor	Excellent	Slurries
Sticky/Tacky Materials	Good	Poor	Poor	Good	Poor	Good	Sticky/Tacky Materials
EQUIPMENT REQUIREMENTS							
Complete Discharge	Fair	Excellent	Excellent	Good	Excellent	Excellent	Complete Discharge
Gentle Blending	Fair	Excellent	Good	Poor	Excellent	Excellent	Gentle Blending
Low Maintenance	Good	Excellent	Fair	Good	Excellent	Excellent	Low Maintenance
Lowest Energy/Amt Blended	Fair	Excellent	Fair	Poor	Excellent	Good	Lowest Energy/Amt Blended
Lowest Initial Cost	Excellent	Good	Good	Fair	Good	Fair	Lowest Initial Cost
Rapid Blending	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Rapid Blending
Rapid Sanitizing	Fair	Excellent	Poor	Fair	Excellent	Excellent	Rapid Sanitizing
Uniform Blending	Fair	Excellent	Good	Good	Excellent	Excellent	Uniform Blending
Uniform Liquid Additions	Fair	Excellent	Good	Good	Excellent	Excellent	Uniform Liquid Additions

RIBBON/PADDLE/PLOW BLENDERS

ROTARY BATCH MIXERS

MUNSON FORBERG MIXERS

CYLINDRICAL PLOW BLENDERS

ROTARY MIXERS (CONTINUOUS)

HIGH INTENSITY BLENDERS (CONTINUOUS)

FOR OBJECTIVE ADVICE ASK THE ONLY MANUFACTURER OF ALL SIX BLENDERS

No blender is best at everything. Which is why you should specify your requirements before specifying your blender.

Problem is, most manufacturers make only one or two kinds of bulk solid blenders, so objective advice about the best one for you may be hard to find.

But Munson manufactures eight types of blenders, six of which are shown above—and offers free lab testing on them all. So in addition to being objective, Munson can tell you precisely how effective—or ineffective—each blender would be at meeting your specific cost and performance requirements.

So before you price-out a blender, spec it out with the expert help of a Munson engineer—at no cost or obligation. And take the risk out of buying a blender.

MUNSON MACHINERY CO., INC.

+1-315-797-0090
USA: 1-800-944-6644

INFO@MUNSONMACHINERY.COM

WWW.MUNSONMACHINERY.COM

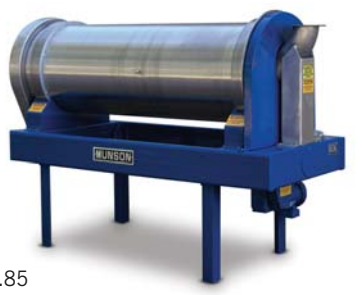
MUNSON

W-0819

CYLINDRICAL PLOW BLENDERS

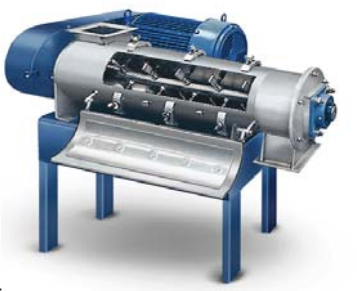
This high performance blender can handle materials that are extremely fibrous, interlocking, dense, moist/oily, cohesive or repellent. The horizontally-oriented mixing shaft typically rotates 3- to 4-times faster than the shafts of trough-style ribbon, paddle and plow blenders, which fills the entire mixing vessel with fluidized material, maximizing transfer rates. These machines can achieve homogeneous blends in ratios to one part per thousand significantly faster than single-shaft low speed agitated blenders, and handle a wider variety of materials. Available with spray injection nozzles for liquid additions, and with high speed choppers for added intensity. Also available jacketed.

ROTARY MIXERS (CONTINUOUS)



This Sanitary Rotary Continuous Mixer blends bulk ingredients in ratios as extreme as one part per million with 100% uniformity regardless of disparities in the bulk densities, particle sizes or flow characteristics of ingredients. Capacity ranges from 30 cu ft/h (0.85 cu m/h) at 1-minute residence time, to 42 cu ft/h (1.19 cu m/h) at 2-minutes residence time. Mixing flights in slowly rotating cylinder distribute ingredients thoroughly and gently while eliminating internal restrictions where material could plug or accumulate. Optional internal spray line allows uniform introduction of a liquid additive for spray coating, de-dusting, perfuming and conditioning of materials.

HGH INTENSITY BLENDERS (CONTINUOUS)



The Munson High Intensity Continuous Blender provides the added shear needed for high speed blending, homogenizing and/or de-lumping of dry ingredients, slurries and pastes. A fast, high capacity machine that operates on small working volumes with minimum residence times of 5 to 30 seconds, it can be equipped with spray injection nozzles for large additions of liquids, which can also serve to dedust dry materials. It features a high-impact, pug mill type, pin and paddle agitator for intensive blending. Capacities range from 300 to 4000 cu ft/h (8.5 to 113 cu m/h). Also available gear reduced for low intensity requirements.