



# Ribbon Blenders

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Double-Ribbon Blenders

Paddle-Ribbon Blenders

Paddle Blenders



**AMERICAN  
PROCESS SYSTEMS**  
EIRICH GROUP

The Pioneer in Material Processing®

# APS Expertise

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For nearly 50 years American Process Systems® has developed and installed equipment tailored to the requirements of many different industries.

Our installations can be found in plants around the world for applications ranging from bakery premix, seasonings, and nutraceuticals to pesticides, animal feed, and detergents.



# Strong & Sanitary Design

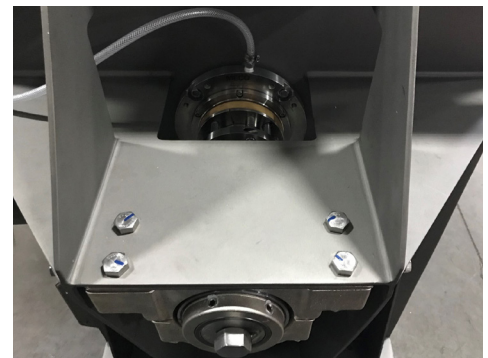
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## The APS housing design

The APS sanitary double-ribbon blenders, paddle blenders, and combination paddle-ribbon blenders consist of a stainless steel, U-shaped mixing tank designed as a one-piece weldment. There are no removable or slotted endplates with seams creating a harborage point. Heavy-duty, plasma-cut plate agitator support posts are flange free with continuous welds ground smooth and polished with large radii throughout.

## The APS agitator shaft

Every APS agitator shaft is constructed from solid stainless steel or carbon steel, and is fully welded to be free of any nuts, bolts, and flanges. The sanitary design and construction of the APS agitator adds structural integrity as it provides much greater strength than pipes or tubes. It also eliminates paths for contamination. Tool-less removable packing gland seals complete the sanitary design and ease of cleaning.





# Design Flexibility

## - for Individualized Process Solutions

### Choose Your Shell Style

#### Traditional U-shaped

The U-shaped shell is found on the majority of ribbon blenders. The full-open top allows for ease of access during cleaning.

#### Semi-cylindrical

This option lends itself to cooker/cooler applications where a greater level of heat transfer is accomplished, when compared to a U-shaped vessel. The large rectangular top provides easy access.



### Choose Your Agitator

#### Double ribbon

The double-ribbon blender is valued for its thorough mixing. It consists of an inner and an outer ribbon, providing counter-directional flow while keeping the product in constant motion throughout the vessel. The inner ribbons move materials toward the endplates of the blender, whereas the outer ribbons move material back toward the center discharge.

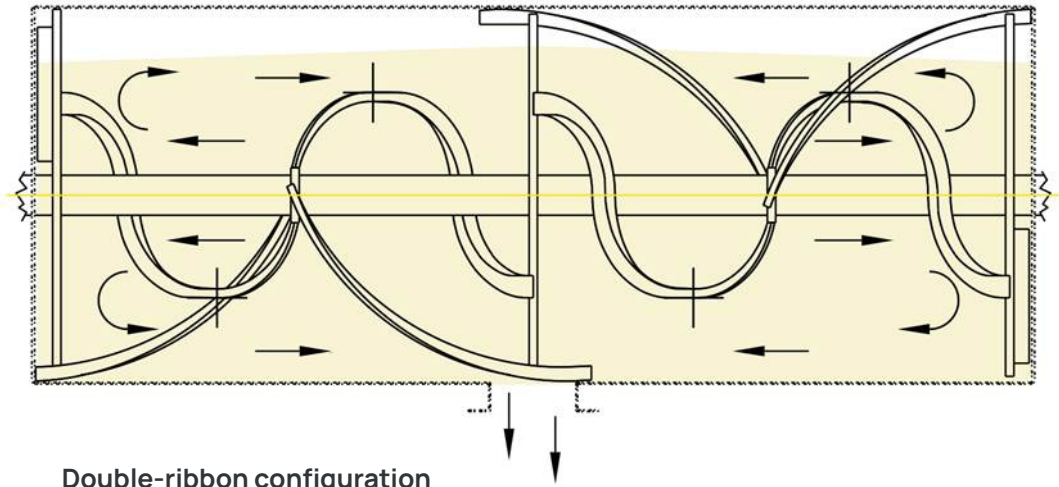
#### Paddle ribbon

The paddle-ribbon agitator combines inner ribbons with outer paddles. It is especially well suited for fragile, heat-sensitive products. While maintaining counter-directional flow, the outer paddles minimize pinch points at the wall, thus introducing less frictional heat than continuous outer ribbon.

#### Paddle only

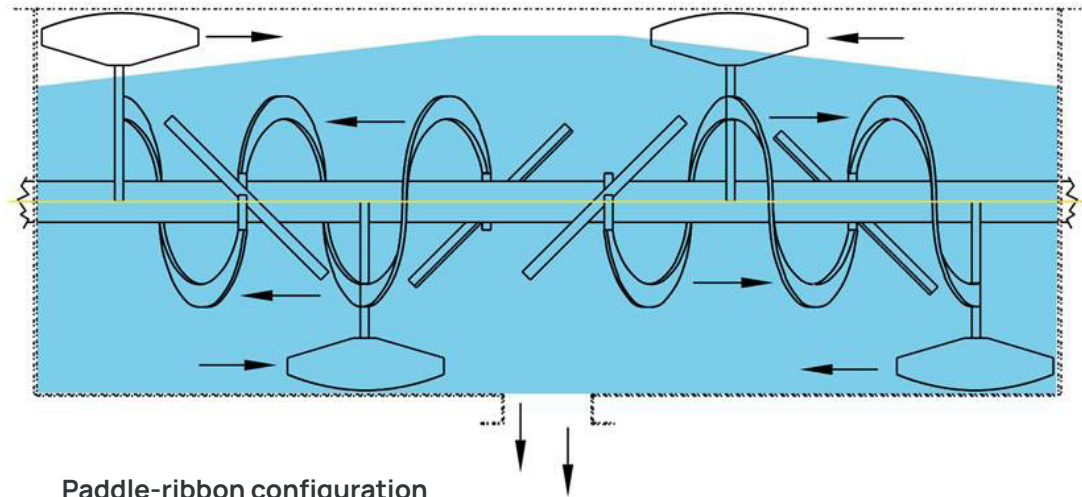
A paddle-only design is best suited for an agitated surge tank.





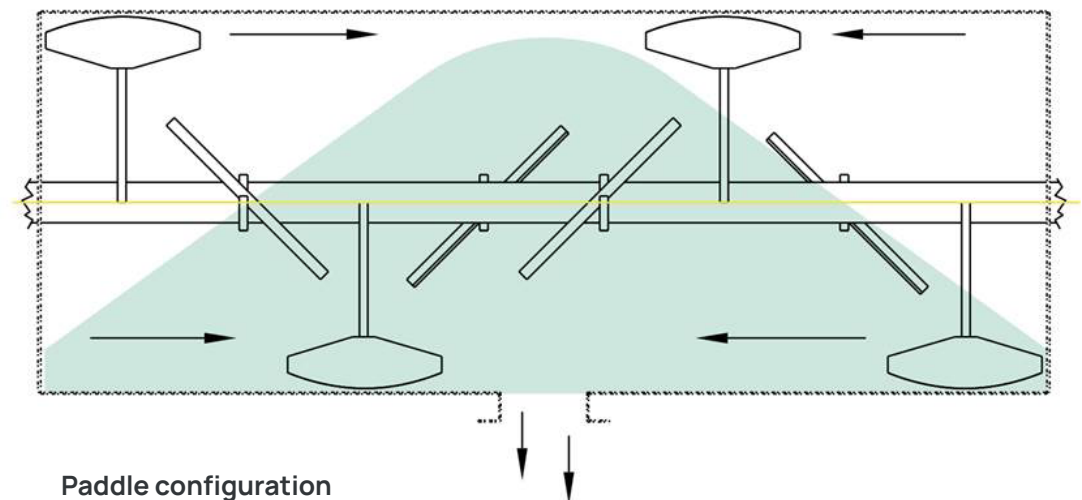
**Double-ribbon configuration**

An inner and outer ribbon provide counter-directional flow while keeping the product in constant motion throughout the vessel.



**Paddle-ribbon configuration**

Combines inner ribbons with outer paddles, maintains counter-directional flow.



**Paddle configuration**

High-speed paddle tools lift the product to produce a very specific mixing pattern.





## Mixing Applications

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### Examples of applications

- Pancake premix
- Brownie mix and cake mix
- Flavored drink mix
- Bakery premix
- Sugar-based beverages
- Vitamins and enriched supplements
- Seasonings
- Sugar and sweeteners
- Icing and frosting
- Soups and broths
- Macaroni salad
- Chicken salad
- Salad dressing

**And many more**



**+** Ask us about your application

# Combination of Options - Tailored to Your Application

## Engineered solutions

We take pride in our engineering and manufacturing skill sets, tailoring our mixing equipment to clients' specific process requirements.

### Cover options

- Bulk bag inlet ports with screens and magnetic grating
- Dust-controlled, easy to clean blender cover
- Covers for hand dumping and easy cleanability
- Removable, pneumatically vibrated tray
- Rare earth or ceramic magnetic grating
- Pneumatically actuated cover assembly
- Metal-detectable and removable A-gasket for dust control and easy cleaning

### Direct drive options (dependent on blender size)

- In-line shaft mount
- Right angle shaft mount

### Chopper motor options

- X-mas style chopper head for high shear
- Tulip style chopper head for medium shear

Our unique chopper motors are coupling free



Bulk bag inlet port



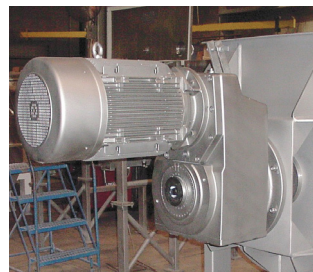
Vibratory tray assembly



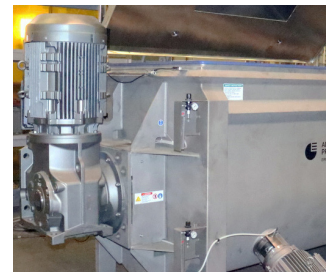
Metal-detectable A-gasket



Pneumatically actuated cover



Direct drive, in-line shaft mount



Direct drive, right angle shaft mount



Tulip-style chopper head

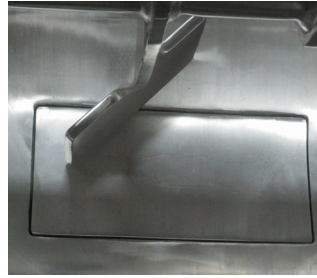


X-mas style chopper head

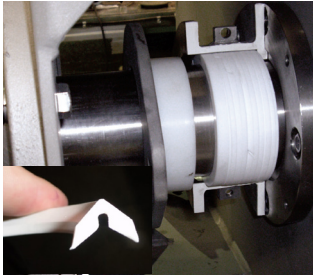




USDA Dairy Standard slide gate



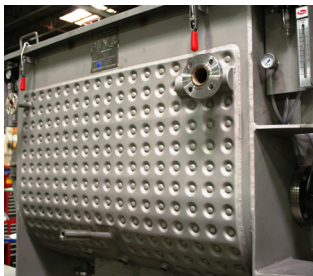
Flush bottom drop gate valve



Split, removable packing gland seals with Teflon V-rings



Bag dump station



Dimpled jacket



Side access doors



Tri-clamped ferrules for liquid addition port



360° spray nozzles for CIP kit



Trapped keys



Control panels

### Discharge options

- Slide/roller gate, or optional USDA Dairy approved slide gate
- Flush bottom drop gate
- Bombay doors

### Seal options

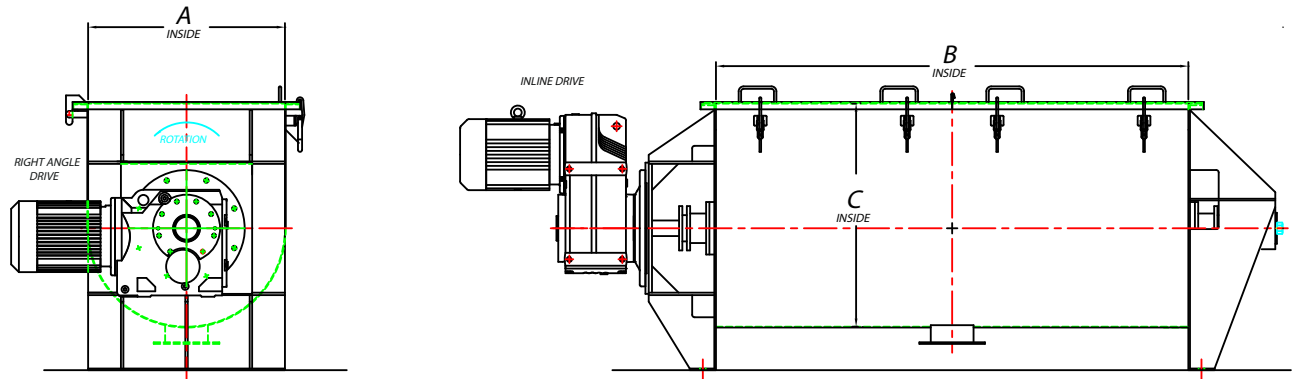
- Seal saver kit. Includes filter regulator and flow meter.
- Split, removable packing gland seals with Teflon V-rings. Suitable for USDA dairy applications

### Other options

- Bag dump station, filtered or non filtered
- Dimpled jacket for heating/cooling
- Side access doors
- Compressed air header for use with seals and discharge valve
- CO<sub>2</sub>/N<sub>2</sub> injection nozzles
- Tri-clamped liquid addition port
- Clean-in-place kit with 360° rotating spray nozzles
- Trapped keys
- Shrouded endplates for a more sanitary design
- Control panels

# Dimensions & Drawings

**+** Ask us which blender size best fits your application



Model	Capacity (ft <sup>3</sup> ) Working Volume	HP* *Depending on Application	Dimensions (inches)		
			A	B	C
DRB-3	3	3	15	30	18
DRB-5	5	3 - 5	17	38	20
DRB-11	11	5 - 15	21	48	26
DRB-24	24	7.5 - 20	26	66	30
DRB-36	36	15 - 30	30	78	34
DRB-55	55	15 - 40	34	90	39
DRB-66	66	20 - 50	37	96	41
DRB-80	80	15 - 40	40	96	48
DRB-100	100	20 - 50	45	96	54
DRB-120	120	25 - 60	44	120	52
DRB-155	155	30 - 75	50	120	59
DRB-180	180	40 - 100	54	120	61
DRB-215	215	40 - 100	54	144	61
DRB-270	270	40 - 100	60	144	66
DRB-325	325	50 - 125	66	144	73
DRB-385	385	60 - 150	72	144	80
DRB-515	515	75 - 200	72	192	80



# APS Ancillary Equipment

## Modular Bag Dump Stations For existing or new setups

Bag dump stations by American Process Systems® are modular in design and easily adaptable to fit into virtually any existing or future setup. This intelligently engineered dust collection system provides dependable dust control by immediately drawing dust away from the operator. The result is a clean, healthy work environment.



Scan the QR code for more detailed information on bag dump stations

## Product Conditioners De-agglomeration technology

Our Product Conditioner provides a cost-effective solution for bagged materials that have been solidified, hardened, or agglomerated, and that often cause bottlenecks in the manufacturing process.

The Product Conditioner utilizes a U-shaped screen frame and a fully welded triple-bar shaft that safely and efficiently returns solid materials to a free-flowing state. The perforated and removable screen assembly allows for a quick changeover to a different screen configuration for each application. Two double-hinged side doors provide easy access for cleaning. The Product Conditioner can be used as a stand-alone unit or be placed on top of a blender.

### Technology & design benefits

- Efficient dust removal
- Controlled dust exposure
- Minimal loss of product
- Effortless system integration
- Clean and healthy work environment
- Simplified product charging

### Filtered station

- Efficient filtration
- In-line filter cleaning via alternating blasts of air
- Easy, tool-free filter replacement
- Light-weight, highly efficient wide-pleated filter cartridges

### Non-filtered station

- Attaches to customer's centralized dust collection system
- Has no filters or blower system

### Installation

- On top of blender, welded or flanged
- Free-standing unit
- On top of APS Product Conditioner



Scan the QR code for more detailed information on product conditioners



# APS Control Panels

## Why buy your controls from Eirich Machines? Three words: Quality - Safety - Performance

### Quality

At Eirich Machines we build our own control panels. We are a UL 508a listed panel shop and are ISO 9001:2015 certified. We carefully choose the components we use to design our machine controls, selecting them based on performance, reliability, and price. All machine controls are fully tested with their respective equipment in a rigorous QC process.

### Safety

Today there is an ever-changing emphasis on machine safety and the world moving towards a global standard for machine safety. At Eirich Machines we take machine safety very seriously. We work hard to keep informed on the latest safety standards and design our control systems with this in mind. We implement the latest safety technology that meets today's standard and in to the future.

### Functional safety standards:

IEC62061 + ISO 13849-1 => IEC/ISO 17305 (2016/18)

### Performance

You invest a lot of capital in high-performance mixing and blending equipment. Why would you not want the control of that equipment to perform to the same standard? At Eirich Machines we know our equipment better than anyone. We design our control system to be precisely matched to our machines. Designed to the latest standards with the latest technology, you can trust that our equipment will be reliable and supportable long into the future.

### Choose between Standard or Performance control panel

The **standard** control panel has a 3.8" color screen and setting of single timer, speed, and display of agitator kW.

The **performance** control panel has a 7" color screen with selection of modes, times, and ten different preset mix profiles. It also displays blender status, drive status, and kW.

Both types are cUL listed, made of 304 stainless steel, and have operator push buttons as required for manual operation.



APS standard control panel with  
3.8-inch color screen



APS performance control panel with  
7-inch color screen



# Test Lab Services

## Put us to the test!

We have an in-house, fully equipped test lab with blenders, mixers, dryers, and reactors. We welcome you to visit and test your product in our equipment. It is the perfect opportunity for R&D, recipe optimization, and to see our manufacturing.

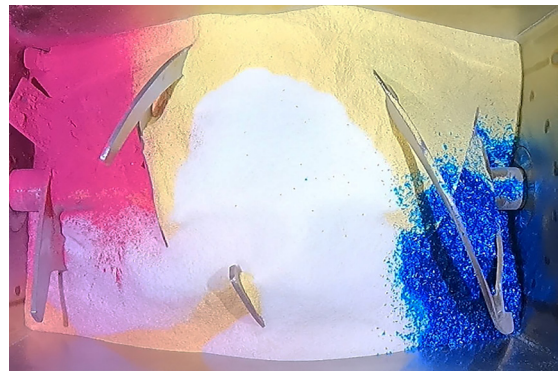
If you can't visit us, we offer virtual trials via livestream video. You interact with our Test Lab Manager during the trials, watch live as your product is processed, and see microscope images of your processed product. Our detailed test reports include photos and video links.

## Rent our equipment!

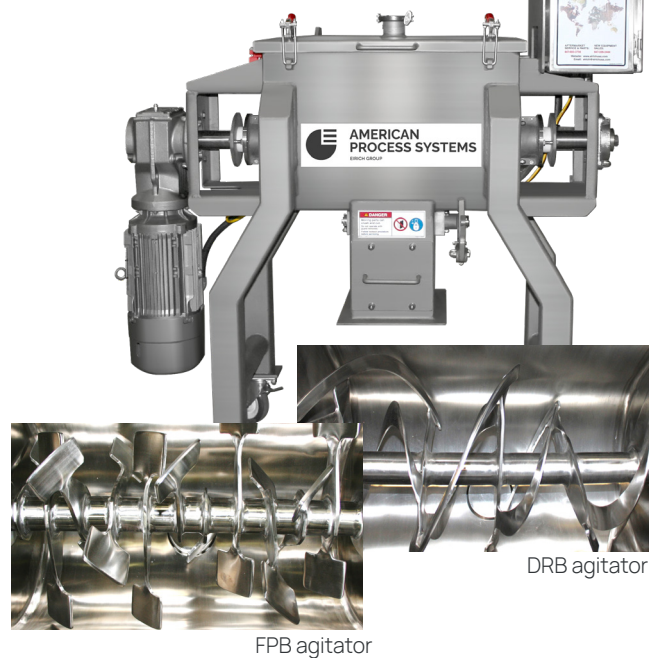
You can rent the lab-size fluidizing paddle blender (FPB-1P5) and try it at your own facility. Optional double-ribbon blender agitator is available.

*"I would like to commend you on the trial recording as it demonstrated the dedicated passion and expertise of your team. The team's confidence in your equipment was illustrated when you can record the trial on an unknown material!"*

- Verne Hogg, ZMM



Scan the QR code to learn more about our FPB-1P5 lab blender



FPB agitator

DRB agitator



# Customer Support

## Our Customer Support team is here for you!

We build our blenders to last for decades, but they do need routine maintenance. Our Customer Support team is here for you when you need spare parts, equipment inspection, training, or have questions about your blender.

## Want to learn more?

Send an email to [customersupport@eirichusa.com](mailto:customersupport@eirichusa.com) or call 847-693-3700.



Scan the QR code to learn more about our  
OptimaBlend® Fluidizing Paddle Blender

Version June 2024. Subject to change.



Eirich Machines, part of worldwide Eirich Group, is an international supplier of machinery, systems, and services for material processing. With the two product lines EIRICH and American Process Systems® (APS), we offer the most comprehensive range of mixers, blenders, pelletizers, dryers, and grinding mills. Eirich Machines is your one-stop shop for all material processing needs with sales, test lab, engineering, manufacturing, and customer support in one location.

**Our APS product line includes:**

- OptimaBlend® Fluidizing Paddle Blenders
- OptimalBlend™ Fluidizing Zone Mixers
- Ribbon Blenders
- Paddle-Ribbon Blenders
- Paddle Blenders
- Plow Blenders
- Dryers/Reactors
- Filtered and Non-Filtered Bag Dump Stations
- Product Conditioners for De-Lumping

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**[www.eirichusa.com](http://www.eirichusa.com)**