



# ADVANCED MATERIAL PROCESSING

2023 PRODUCT CATALOG



**kason**

**MARION**



Advanced Material Processing brings together manufacturers of industry-leading material processing equipment to help customers improve production and widen profit margins.

## KASON

Kason has 50 years of experience designing and manufacturing screening, drying, cooling and processing equipment.

## MARION

Marion, an 80-year-old company, custom manufactures processing equipment with industrial mixers, blenders and drying systems.

Both brands are proud of the reputation they've built for manufacturing equipment that stands the test of time. If you want machines that last, go with Kason and Marion.

### PRIMARY INDUSTRIES WE SERVE



Food & Beverage



Pharmaceutical



Nutraceutical



Chemical Processing



Cannabis & Hemp Processing



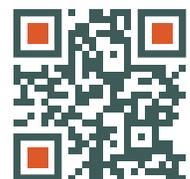
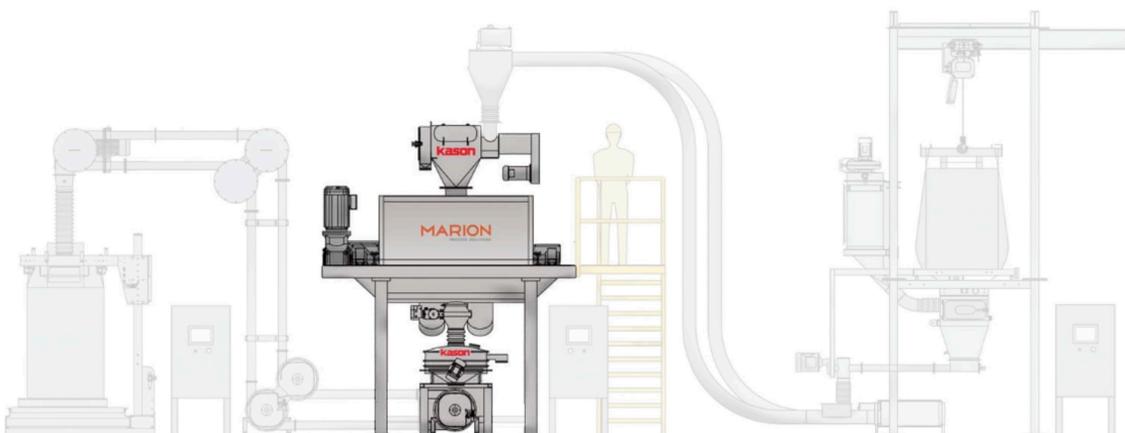
Distillery



Powder Processing



Aquaculture



Visit Us Online to Learn More

## CIRCULAR VIBRATORY SCREENERS & SEPARATORS



## SEPARATOR CONE MILLS



## CENTRIFUGAL SIFTERS



## STATIC SIEVE SCREENERS & SEPARATORS



## FLUID BED PROCESSORS



Kason machines are engineered and inspected to ensure top quality that adheres to the most stringent of standards. That's because we know the important role these machines play in critical production processes.

# KASON

## PRIMARY INDUSTRIES WE SERVE

Kason offers a wide selection of screening, drying, cooling and processing equipment, complete with complimentary testing and on-site trials. You're in good hands, because most of our application engineers have an average of 25 years of industry experience.



Food and Beverage



Pharmaceutical



Nutraceutical



Chemical Processing



Cannabis & Hemp Processing



Distilleries



Aquaculture



Powder Processing

## TRUSTED BY TOP MANUFACTURERS



Have Questions? Call 1.973.467.8140 or visit [kason.com](http://kason.com)



# kason

## VIBROSCREEN

Circular Vibratory  
Screeners & Separators



Scan For More  
Information

### *Nobody does screeners like Kason.*

Make things easier for yourself with a Kason VIBROSCREEN.

The industry's best screeners and separators are built for easy maintenance, cleanability, operation and installation.



Quick-Clean Design for  
Fast Screen Changes



Increase Throughput and  
Minimize Labor Costs



Precise and Efficient  
Material Separation

### Ideal Machine For

- Solids/solids separation
- Sifting
- Classifying
- Scalping
- De-dusting
- Solids/liquids separation
- De-lumping
- De-watering



Advanced  
Material Processing

Have Questions? Call 1.973.467.8140

Or visit [kason.com](http://kason.com)

KASON VIBRATORY SCREENER MATRIX									
Kason VIBROSCREEN Machine Diameter									
Screen Diameter	Our smallest screener					Our largest screener			
	18 in. (45.7 cm)	24 in. (61 cm)	30 in. (76.2 cm)	40 in. (101.6 cm)	48 in. (121.9 cm)	60 in. (152.4 cm)	72 in. (182.9 cm)	84 in. (213.4 cm)	100 in. (254 cm)
Single-Deck	Y	Y	Y	Y	Y	Y	Y	Y	Y
Multi-Deck	Y	Y	Y	Y	Y	Y	Y	Y	Y
Portable/Batch Sifter	Y	Y	Y	N	N	N	N	N	N
Gap-Free	N	Y	Y	Y	Y	Y	N	N	N
Batch Hopper/Feed Control	Y	Y	Y	Y	Y	N	N	N	N
Ultrasonic	Y	Y	Y	Y	Y	Y	Y	N	N
Air-Lift	N	N	Y	Y	Y	Y	Y	Y	Y
High-Capacity Scalping	N	Y	Y	Y	Y	Y	Y	Y	Y
Low-Profile	Y	Y	Y	Y	Y	Y	Y	Y	N
Clean-in Place	Y	Y	Y	Y	Y	Y	Y	Y	N
Quick Clean	Y	Y	Y	Y	Y	Y	Y	Y	N
Sanitary	Y	Y	Y	Y	Y	Y	Y	Y	N
Clamshell	N	Y	Y	Y	N	N	N	N	N
Anti-Blinding Devices	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bag Dump Station	Y	Y	Y	Y	Y	Y	N	N	N
Kascade	N	Y	Y	Y	Y	Y	Y	Y	N
Internal Recycle	N	N	Y	Y	Y	Y	Y	Y	Y
Inline Pressure Sifter	N	Y	Y	Y	Y	Y	N	N	N
Explosion Proof	Y	Y	Y	Y	Y	Y	Y	Y	Y
ATEX	Y	Y	Y	Y	Y	Y	Y	Y	Y
3A Sanitary	Y	Y	Y	Y	Y	Y	Y	Y	N
BISSC	Y	Y	Y	Y	Y	Y	Y	Y	Y
CE	Y	Y	Y	Y	Y	Y	Y	Y	Y
CSA	Y	Y	Y	Y	Y	Y	Y	Y	Y

## Versatile. Powerful. Precise.

Kason's VIBROSCREEN Circular Vibratory Screeners and Separators help cut labor costs and speed up crucial processes by screening, separating and sifting products of varying capacities through batch or continuous operations.

- Designed and constructed to industrial, food, dairy or pharmaceutical standards
- Enclosed, dust-free operation
- Heavy-duty construction for continuous operation
- Available in single and multiple deck designs



# kason

## CENTRI-SIFTER

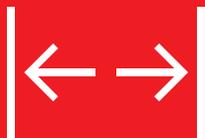
The Centrifugal Sifter  
Made to Do More With Less



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Information

***Increase throughput by 30% without wasting more space, labor or time.***

We design our centrifugal sifters and separators to handle a wide range of applications, such as screening powders and granular materials, continuous scalping of dry or moist materials, dewatering, and separating liquids and solids.



Save More  
Floor Space

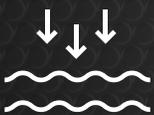


Lower Labor and  
Maintenance Costs



Maximize  
Throughput

### Ideal Machine For



Dewatering



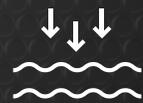
Sifting



Screening



Separating



Scalping



Advanced  
Material Processing

Have Questions? Call 1.973.467.8140

Or visit [kason.com](http://kason.com)

## Flexible. Dependable. Quality.

Doing more with less – it’s what Kason Centri-Sifters do best.

Now you can process more powdered material, more bulk solids and more slurries without sacrificing your valuable floorspace, labor or time. Designed for simple, one-person operation and maintenance, our centrifugal sifters include 6 standard models to include smaller footprints than the competition.

		KASON CENTRIFUGAL SIFTER MATRIX					
		Kason Centri-Sifter Model					
		Our smallest sifter			Our largest sifter		
Centri-Sifter Model Code		CO	GO	KO	MO/M1	YO	XO
CENTRI-SIFTER OPTIONS	3 Bearing EZ Clean	N	Y	Y	Y	Y	Y
	Cantilever EZ Clean	Y	Y	Y	Y	Y	Y
	Drive Type	Direct Only	Direct or Belt	Direct or Belt	Direct or Belt	Direct or Belt	Belt Only
	Bag Dump Station	N	Y	Y	Y	Y	Y
	Twin Ultra-High Capacity	N	N	Y	Y	Y	Y
	Low-Profile	Y	Y	Y	Y	Y	Y
	Quick-Clean (Sanitary)	Y	Y	Y	Y	Y	Y
	Clean In Place (CIP)	Y	Y	Y	Y	Y	Y
	Anti-Blinding Device	Y	Y	Y	Y	Y	Y
	Inline Pressure Sifter	N	Y	Y	Y	Y	Y
COMPLIANCE	Explosion Proof	Y	Y	Y	Y	Y	Y
	ATEX	Y	Y	Y	Y	Y	Y
	BISSC	Y	Y	Y	Y	Y	Y
	CE	Y	Y	Y	Y	Y	Y
	CSA	Y	Y	Y	Y	Y	Y
FLOW RATES*	Dry Pounds per Hour	1-1,000 lbs. (.45-454 kg)	300-2,000 lbs. (136-907 kg)	2,000-6,000 lbs. (136-2,722 kg)	6,000-15,000 lbs. (2,722-6,804 kg)	10,000-30,000 lbs. (4,536-13,608 kg)	30,000-60,000 lbs. (13,608-27,216 kg)
	Wet Gallons per Hour	N/A	1-10 gal. (3.8-37.9 L)	10-30 gal. (37.9-113.6 L)	10-50 gal. (37.9-189.3 L)	30-200 gal. (113.6-757.1 L)	200-300 gal. (757.1-1,135.6 L)

All Kason centrifugal sifters, screeners and separators are constructed of stainless steel with optional sanitary finishes suitable for pharmaceutical, food and dairy applications, as well as industrial applications involving frequent screen changes, inspections or runs of multiple materials with no cross-contamination.

Perf plates down to 10 mesh equivalent

Wedgewire down to 40 mesh equivalent (dry) 150 mesh (wet)

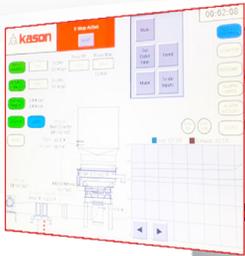
\* Flow rate capabilities should be considered as a guide when optimally configured as rates will vary by application. Additionally, a twin (ultra-high capacity) unit will roughly double throughput.

# kason

## VIBRO-BED Fluid Bed Processor Spec Sheet

Compact, Cost-Saving Equipment That  
Packs a **HIGH-END PUNCH**

User-friendly  
digital controls



### New Option:

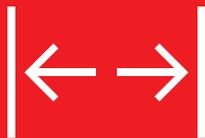
Exhaust recycling for  
up to 50% energy savings



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Information



Circular bed design uses  
100% of surface area to  
optimize airflow



Save More  
Floor Space



Speed Up  
Drying Time



Reduce Cleaning  
and Downtime

Ideal Machine For



Drying



Cooling



Scalping



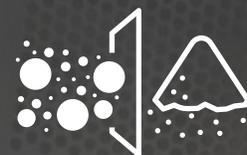
Agglomerating



Moisturizing



De-Dusting



De-Agglomerating

		Kason VIBRO-BED Processor Diameter						
		Our smallest bed diameter			Our largest bed diameter			
	NOMINAL BED DIAMETER (INCHES)	24	30	40	48	60	72	84
	SINGLE DECK	Y	Y	Y	Y	Y	Y	Y
HEATER PACKAGE	NOMINAL AIR FLOW RATES (SCFM)	500-1000	500-1600	1700-2500	1700-4000	3300-6000	4000-9000	4800-12000
	ELECTRIC	Y	Y	Y	Y	Y	Y	Y
	NATURAL GAS	Y	Y	Y	Y	Y	Y	Y
	STEAM	Y	Y	Y	Y	Y	Y	Y
	COOLING COIL	Y	Y	Y	Y	Y	Y	Y
COMPLIANCE	EXPLOSION PROOF*	Y	Y	Y	Y	Y	Y	Y
	CE	Y	Y	Y	Y	Y	Y	Y
	CSA	Y	Y	Y	Y	Y	Y	Y
	UL	Y	Y	Y	Y	Y	Y	Y
OPTIONS	EZ AIRLIFT	N	Y	Y	Y	Y	Y	Y
	EXHAUST RECYCLING	N	N	N	Y	Y	Y	Y
	CLEAN-IN PLACE	Y	Y	Y	Y	Y	Y	Y
	QUICK CLEAN	Y	Y	Y	Y	Y	Y	Y
	SANITARY	Y	Y	Y	Y	Y	Y	Y
	AGGLOMERATOR OPTION	Y	Y	Y	Y	Y	Y	Y
	DUST COLLECTOR	Y	Y	Y	Y	Y	Y	Y
	CYCLONE**	Y	Y	Y	Y	Y	Y	Y
	8" ROTARY AIRLOCK	Y	Y	Y	Y	Y	Y	Y
	SLIDEGATE	Y	Y	Y	Y	Y	Y	Y
	MANUAL PLOUGH GATE	Y	Y	Y	Y	Y	Y	Y
	PNEUMATIC PLOUGH GATE	Y	Y	Y	Y	Y	Y	Y
	WIER	Y	Y	Y	Y	Y	Y	Y
	CASTERS	Y	Y	Y	Y	N	N	N
CONTROL PANEL	Y	Y	Y	Y	Y	Y	Y	
	EXPECTED THROUGHPUT RANGES***	UP TO 250 LB/HR	UP TO 500 LB/HR	UP TO 800 LB/HR	UP TO 1300 LB/HR	UP TO 1800 LB/HR	UP TO 2500 LB/HR	UP TO 4000 LB/HR
	NOMINAL AIR FLOW RATES (SCFM)	500-1000	500-1600	1700-2500	1700-4000	3300-6000	4000-9000	4800-12000

\* Kason only supplying explosion rated components, customer responsible for all suppression

\*\* Cyclone not available with agglomerator

\*\*\* Rates subject to vary depending on material and application

## STRONGER, LIGHTER & MORE EFFICIENT

The compact, circular design of Kason's VIBRO-BED makes it easier to achieve consistency and save on energy and maintenance costs than traditional rectangular-shaped fluid bed processors.

An inherently stronger and lighter construction also makes our fluid bed processors faster to build — and finish to sanitary standards. That means better lead times and easier installs for operations (batch or continuous) looking to dry, cool or moisturize bulk foods, pharmaceuticals or chemicals.



Kason USA  
67-71 East Willow Street  
Millburn, NJ 07041-1416  
kason.com



# kason

## CROSS-FLO

Static Sieve Screeners  
& Separators



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Information

### *Higher rates, lower maintenance with CROSS-FLO.*

Screen and separate product at ultra-high rates, save on energy and lower maintenance costs with a Kason CROSS-FLO Static Sieve Screener or Separator.



No Moving Parts Keeps  
Maintenance Time and Cost  
at a Minimum



No Electrical Drive/Screen  
Changes Keep Operational  
Costs Low



High-Rate Screening Even  
with Corrosive and Abrasive  
Materials

### Ideal Machine For



Sifting



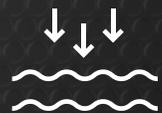
Screening



Separating



Scalping



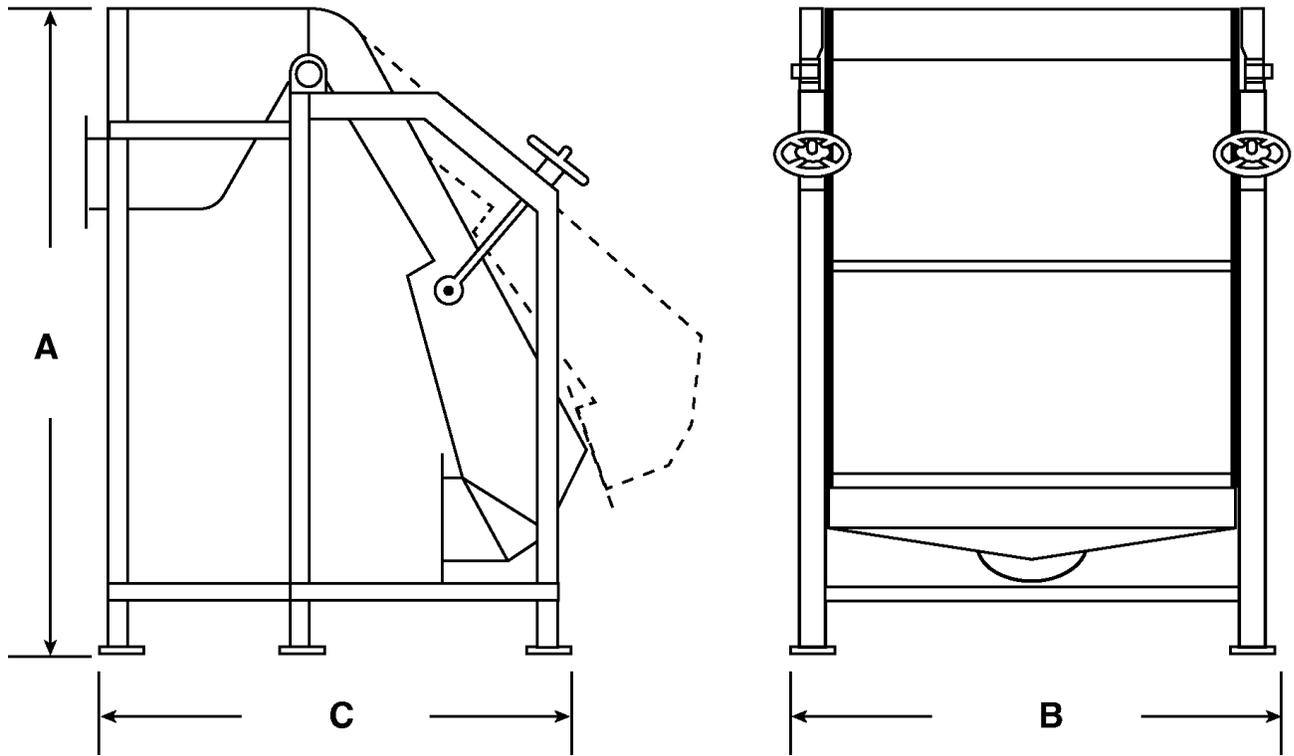
Dewatering



Advanced  
Material Processing

Have Questions? Call 1.973.467.8140

Or visit [kason.com](http://kason.com)



### KASON CROSS-FLO SIEVE NOMINAL DIMENSIONS

Model	A	B	C
CF 2430	84" (213.4 cm)	33" (83.2 cm)	54" (137.2 cm)
CF 3630	84" (213.4 cm)	44" (117.8 cm)	54" (137.2 cm)
CF 4854	105" (266.7 cm)	56" (142.2 cm)	67" (170.2 cm)
CF 6054	105" (266.7 cm)	68" (172.2 cm)	67" (170.2 cm)
CF 7254	105" (266.7 cm)	80" (203.2 cm)	67" (170.2 cm)

### Faster. Adjustable. Dependable.

Scalp, sift, separate, screen and dewater faster than ever with a reliable Kason CROSS-FLO Static Sieve Screener or Separator. CROSS-FLO machines are designed to save space and cost with simple designs and mechanics that require low maintenance and zero energy consumption while maintaining outstanding performance and speed.

- Freestanding to save floor space
- Corrosion and abrasion resistance
- Fully adjustable decks
- Outstanding performance in the most challenging applications
- Easily modified to meet any requirement



## CONE MILLS

Conical milling for consistent particle size reduction



Scan For More Information



### *When precision matters in material processing.*

Our cone mills offer gentle, cost-effective and precise wet and dry milling, pre-milling, preconditioning, granulating, and de-agglomeration of materials that are fatty, heat-sensitive, sticky, moist or fragile.



Gentle and Precise for Accurate Sizing of Materials



Wide Range of Interchangeable Grinding Media and Tooling Options for Flexibility



Operator-Friendly Access Points for Easy and Safe Cleaning, Low Noise and Heat Generation

### Ideal Machine For

- Size Reduction
- De-Agglomeration
- Preconditioning
- Granulating
- Milling



Advanced Material Processing

Have Questions? Call 1.973.467.8140

Or visit [kason.com](http://kason.com)

## CONE MILL APPLICATIONS

Model Number	Product	Throughput lbs (kg)/hr	Application
CGM-150	Pigments-De-agglomeration	462.9 lbs. (210 kg)/hr	1mm Round Hole Cone, Standard Beater
CGM-150	Various Food Flavours	154.3 lbs. (70 kg)/hr	3mm Round Hole Cone, Standard Beater
CGM-250	Ammonium Chloride	440.9 lbs. (200 kg)/hr	2mm Round Hole Cone, Low Bar Beater
CGM-250	Reject Biscuits Regrind	573.2 lbs. (260 kg)/hr	6mm Square Hole Cone, Standard Beater
CGM-350	Cereal Flake	2,204.62 lbs. (1,000 kg)/hr	3mm Round Hole Cone, Standard Beater
CGM-350	Extruded Maize & Buckwheat	925.9 lbs. (420 kg)/hr	2mm Raised Hole Cone, Standard Beater
CGM-550	Milk Powder	17,196.1 lbs. (7,800 kg)/hr	4mm Round Hole Cone, Low Bar Beater
CGM-550	Lactose & Whey Permeate	9,920.8 lbs. (4,500 kg)/hr	3mm Round Hole Cone, Low Bar Beater
CGM-750	Mineral Supplements	39,683.2 lbs. (18,000 kg)/hr	5mm Round Hole Cone, Low Bar Beater
CGM-750	Various Malted Cereals	3,218.7 lbs. (1,460 kg)/hr	1.5mm Round Hole Cone, 4 arm Beater

### Precise. Simple-to-Use. Flexible.

Experience the flexible, cost-effective way to gently and precisely reduce material size to 125-250 microns. With a space-saving and operator-friendly design, Kason Cone Mills can be easily adapted to satisfy specific requirements for food, pharmaceutical, powder processing and other related industries.

- Made from AISI 304L and 316L, Hastelloy and other special alloys
- Choose between gravity-fed or vacuum conveying systems
- A wide selection of drive options available
- An extensive range of conical screens are offered for different applications
- Reduction in dust generation and product build-up during operation
- Sanitary construction for food, chemical, pharmaceutical and ATEX applications

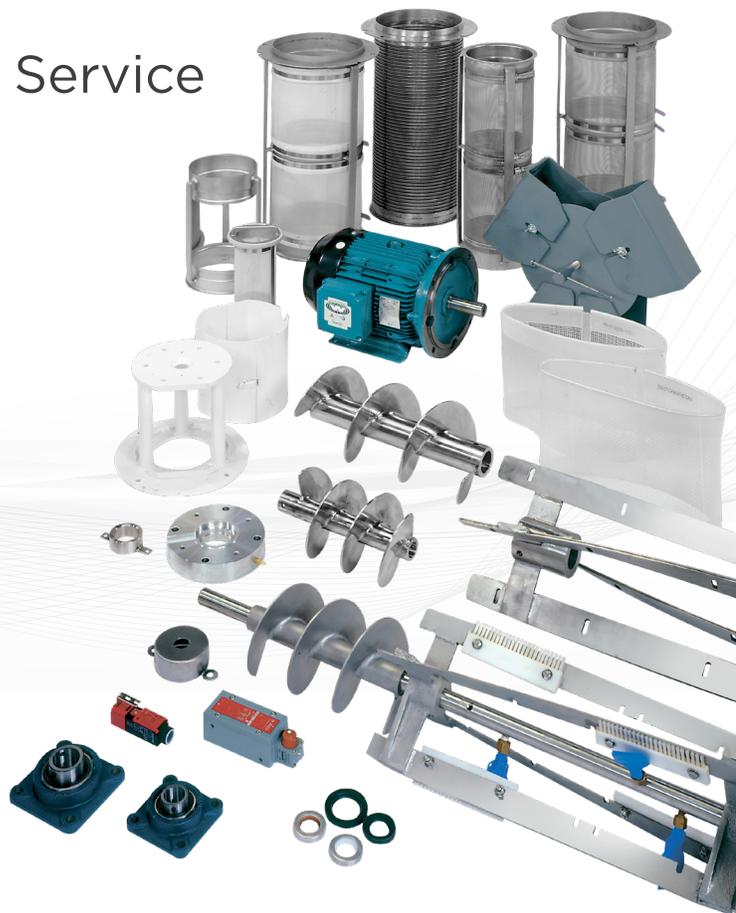
# kason Aftermarket Parts & Service

## Get the Parts You Need Fast

When you need parts or service for screeners, sifters, separators and other types of material processing equipment, Kason can get you what you need in a moment's notice.

Keep your machine producing like new for longer by partnering with one of the most trusted names in industrial processing equipment.

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Information



### Replacement Parts Include:

- Adaptors
- Anti-blinding devices
- Backing plates
- Bearings
- Blades and cutters
- Circular bases
- Clamp ring assemblies
- Control panel components
- Drives
- Ducts
- Filters
- Flexible connectors/flexible socks
- Frames
- Gaskets (food-grade)
- Gears
- Housings
- Hoses
- Motors
- Motor support tables
- Nuts and bolts
- Pumps
- Replacement roundscreens
- Rotor assemblies
- Safety railings
- Seal rings
- Shaft assemblies
- Side cutters
- Topside wipers
- Valves



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Material Processing

Have Questions? Call 1.973.467.8140

Or visit [kason.com](http://kason.com)

# kason Screen Replacement

## Helps You Keep Your Operation Running Smoothly

Don't compromise your ability to efficiently separate and classify materials. Keep production rates high and processing times low with Kason's K-Series screen replacement program.



### Round Vibratory Screens

5 types of screens from 18 to 100 in. (457 to 2,540 mm) in diameter for all makes and models of circular vibratory screeners.

**K-Dura** round screens for general purpose applications

**K-Strong** round screens for high material loadings

**K-Sani** round screens for 3-A, FDA, USDA and cGMP applications

**K-Klean** round self-cleaning screens

**K-Perf** round perforated plate screens for maximum durability



### Centrifugal Sifter Screens

2 types of replacement screens for all makes and models of centrifugal sifters.

**K-Centri** cylindrical screens with durable woven wire or synthetic screen mesh for general purpose applications

**K-Duracyl** cylindrical screens with heavy duty wedgewire or perforated plate screens for severe-duty jobs involving high material loadings, abrasive materials, high- and low-temperature conditions and corrosive environments

### Screen Material Options:

Single or double mesh designs

#304 stainless, #316 corrosion-resistant stainless, magnetic #430 stainless, exotic alloys (e.g. duplex, Hastelloy®, Monel® or Alloy20) and synthetics (e.g. nylon, polyester and polypropylene) available



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Material Processing

Have Questions? Call 1.973.467.8140

Or visit [kason.com](http://kason.com)

# HOW KASON MAKES THINGS EASY FOR YOU



**Preventative Maintenance**  
Avoid Expensive Repairs  
and Downtime



**Equipment Optimization**  
Make Cost-Saving  
Efficiency Adjustments



**Installation Supervision**  
Eliminate Costly  
Pre-Production Errors



**Operator Training**  
Educate Staff on Running and  
Maintaining Equipment



**Commissioning Equipment**  
Certify Your Equipment Meets  
Specifications



**Refurbishment and Retrofits**  
Repair or Upgrade Your  
Equipment



## INTERESTED IN FREE TESTING OF YOUR APPLICATION WITH KASON?

Ask about our Iowa, Germany or UK-based facilities, where you can test your application in our equipment before you buy. Our experienced application engineers help you get the most out of your process and provide quality analysis to show you're getting a dependable machine.



Scan the QR code to learn more about Kason's Testing Services.

# MARION

## PRIMARY INDUSTRIES WE SERVE

There are many factors that go into selecting the right machine for your application - everything from what material you're processing to whether you need it to be pharmaceutical-grade. But Marion's expert application engineers work with you every step of the way, making sure you get a machine that's a perfect fit for your specifications and production needs.



Food & Beverage



Pharmaceutical



Nutraceutical



Chemical Processing



Agricultural



Minerals



Biomass



Plastics

## TRUSTED BY TOP MANUFACTURERS



Have Questions? Call 800.397.6731 or visit [marionsolutions.com](http://marionsolutions.com)



# MARION

## Horizontal Mixers



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*Keep things moving with Marion mixers.*

Marion Horizontal Mixers offer the perfect blend between speed and blend quality. Because the machine is built specifically for your application, you achieve faster production while maintaining high blend quality.



Fast Mixing Rates  
with High Blend Quality



Superior Sanitation  
and Cleanability



Available for Both  
Continuous and Batch Mixing

### Ideal Machine For

- Mixing
- Blending
- Slurries & Viscous Materials
- Continuous Mixing
- Batch Mixing

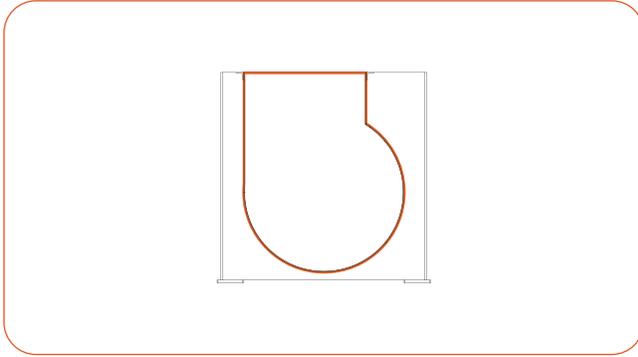


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Have Questions? Call 800.397.6371

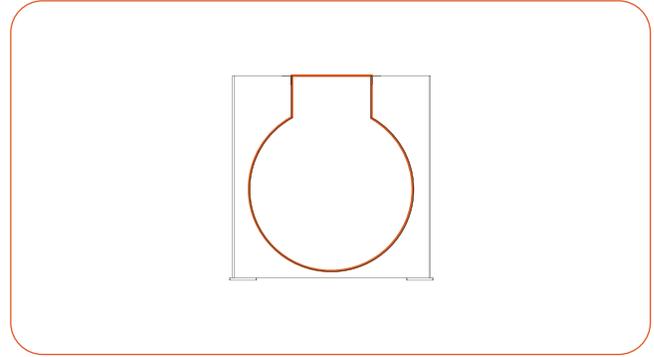
Or visit [marionsolutions.com](http://marionsolutions.com)

## MIXER TROUGH DESIGN OPTIONS



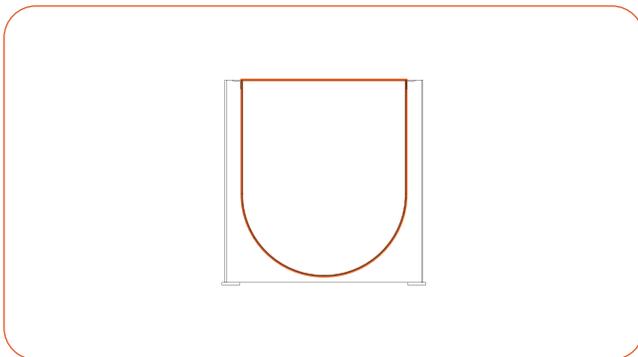
### Semi-Cylindrical Trough

- Best for pastes or slurries
- Reduces degradation of fragile ingredients
- Allows mixing of oversized materials
- Good choice for mixing sticky or tacky material



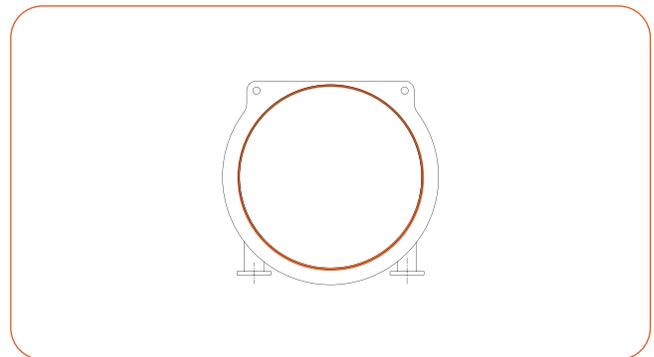
### Semi-Semi-Cylindrical Trough

- Best for liquids and slurries
- Ideal for applications that require vacuum to be pulled
- Rated for up to 29 inHg at 14 psig.
- Maximizes product contact for jacketed mixers that need heating or cooling.



### U-Shaped Trough

- Largest production capacity
- Easiest to clean
- Most commonly used



### Full Cylindrical Trough

- Agitator sweeps 360 degrees of rotation
- Largest contact surface area for heating or cooling
- Good fit for vacuum or low pressure applications

## Horizontal Mixer Specifications

Continuous Mixers	8 standard models	1-205 ft <sup>3</sup> (.03-5.8 m <sup>3</sup> ) working capacity per minute.
Batch Mixers	23 standard models	1.5-600 ft <sup>3</sup> (.04-17 m <sup>3</sup> ) working capacity per minute.

## Speed. Quality. Durability.

For more than 85 years, Marion has set the standard for mixing. With a wide range of specs available – including customizing for any of your facility's restraints or requirements – Marion Horizontal Mixers are built to give you consistent results for decades.

Don't let production timelines and throughput goals compromise your product quality. Because of their high-quality construction, Marion's Horizontal Mixers are built for the long haul.

### Other Features:

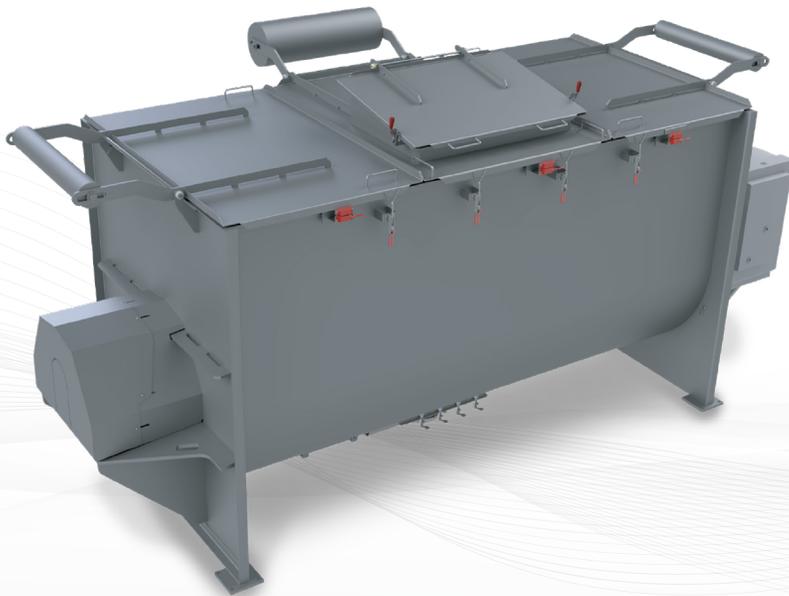
- Agitator options available for specific applications
- On-site installation support available
- Material and finishes available to meet all sanitary or other requirements

# MARION

## Custom Design Options



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### *Slash mixing times in half with Marion.*

Customizing mixing equipment for your specific application may cost a bit more up front, but in the long term the efficiencies add up to lower operational costs and a better quality product.

### How to **Customize** Your Industrial Mixer

#### Chopper

- Intense cutting action to assist in blending
- 3,600 rpm
- Tulip, knife blade or hybrid tulip/knife choices

#### Discharge

- Hinged contour
- Knife
- Roller gate
- Flush hinged
- Drop-bottom
- Butterfly valve

#### Mainshaft Seals

- Stuffing box
- Split design
- Mechanical

#### Additional Features

- Drives specifically selected
- Elevated work platforms
- Smart Air (mainshaft seals)
- 3-A compliant design
- Hoppers (stationary or agitated)
- Integral dimpled jackets
- Controls
- Load cells
- Sifting

#### Counterweighted Doors

- Ergonomic assist for easy access
- Solid weight (no hollow tubes)

#### Spray

- Spray or inject designs
- Sanitary and removable for cleaning available



Four Agitator Design Options Available



Easy-to-Clean Features Save Time and Money



Reduce Power Costs on a Per Ton Basis



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## MIXER AGITATOR DESIGN OPTIONS



### Paddle Agitator

- Designed for gentle mixing of solids of dissimilar size, shape, density, and viscosity.
- Materials travel in an end-to-middle, 3D figure-eight pattern for consistent mixing.
- Available welded, bolted, or a combination of both depending on the application.



### Ribbon Agitator

- Ideal for low-density, free-flowing materials that are similar size, shape, and density.
- Shearing action is a good fit for mixes with small agglomerates.
- Double ribbon: No gaps between flightings eliminates potential for pockets of unmixed or undermixed material.



### Fluidizing Agitator

- Uses large paddles with dual-directional sweeping movements to create a fluidizing bed.
- Minimizes direct contact with paddles because air is continually pushed both outwards and inwards.
- Fast processing, low maintenance and easy cleaning.
- Food-grade finishes available for sanitary design requirements.



### Hybrid Agitator

- Combines tumbling action of paddle agitators with rolling pattern of ribbon mixers to create a double-reversing effect.
- Ideal for materials that tend to mound in the center of the mixer.
- Creates more even mixing and product levels inside the trough during mixing.
- Can be customized with paddle mixers or ribbon agitators on the inside or outside.

## Horizontal Mixer Specifications

Continuous Mixers	8 standard models	1-205 ft <sup>3</sup> (.03-5.8 m <sup>3</sup> ) working capacity per minute.
Batch Mixers	23 standard models	1.5-600 ft <sup>3</sup> (.04-17 m <sup>3</sup> ) working capacity per minute.

## Customize Your Equipment with Our Expert Application Engineers

Our application engineers have an average 25 years of experience in the field and can work with you from start to finish to customize your equipment for your specific application.



# MARION

## V Cone Blender



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### *Simple design for quick blends, easy discharge and cleaning.*

Embrace the simple yet durable construction of the Marion V-Cone Blender to efficiently blend your products with uniform and gentle mixing. The distinctive V shape not only facilitates cleanliness, but it also minimizes the need for frequent maintenance.



Offers Precision Tooling and Finish for Maximum Cleanability



V Shape Promotes Drainage and Discharge for Improved Cleanliness



Cost-efficient, High-Quality Construction, Fit and Finish

### Ideal Machine For

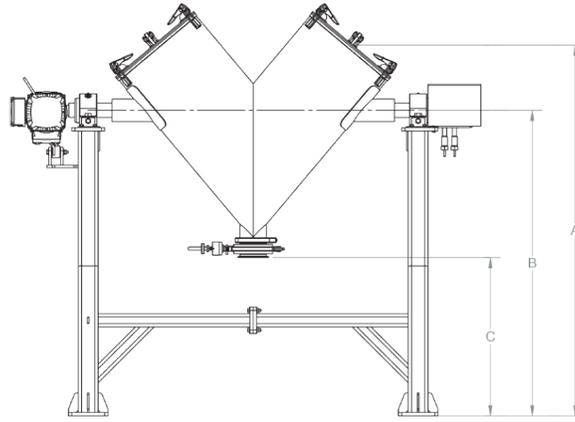
- Mixing
- Blending
- Delicate Materials
- Abrasive Solids



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## V Cone Blender Specifications

Model Number	Working Capacity (ft <sup>3</sup> )	Working Capacity (L)	Inlet Height (A)	Centerline Height (B)	Discharge Height (C)	Discharge Diameter (in)	HP
VC-25	.25 ft <sup>3</sup> (.007 m <sup>3</sup> )	1.8 gal. (7 L)	29 in. (73.7 cm)	20 in. (50.8 cm)	24 in. (61 cm)	4 in. (10.2 cm)	0.75
VC-50	.5 ft <sup>3</sup> (.014 m <sup>3</sup> )	3.7 gal. (14 L)	30 in. (76.2 cm)	20 in. (50.8 cm)	24 in. (61 cm)	4 in. (10.2 cm)	1
VC-1.5	1.5 ft <sup>3</sup> (.042 m <sup>3</sup> )	10.6 gal. (40 L)	52 in. (132.1 cm)	39 in. (99.1 cm)	24 in. (61 cm)	4 in. (10.2 cm)	1.5
VC-2.5	2.5 ft <sup>3</sup> (.071 m <sup>3</sup> )	18.5 gal. (70 L)	56 in. (142.3 cm)	41 in. (104.1 cm)	24 in. (61 cm)	4 in. (10.2 cm)	2
VC-5	5 ft <sup>3</sup> (.14 m <sup>3</sup> )	37 gal. (140 L)	64 in. (162.6 cm)	46 in. (116.8 cm)	24 in. (61 cm)	4 in. (10.2 cm)	3
VC-10	10 ft <sup>3</sup> (.28 m <sup>3</sup> )	72.6 gal. (275 L)	86 in. (218.4 cm)	64 in. (162.6 cm)	36 in. (91.4 cm)	6 in. (15.3 cm)	5
VC-20	20 ft <sup>3</sup> (.57 m <sup>3</sup> )	145.3 gal. (550 L)	97 in. (246.4 cm)	69 in. (175.3 cm)	36 in. (91.4 cm)	6 in. (15.3 cm)	10
VC-30	30 ft <sup>3</sup> (.85 m <sup>3</sup> )	224.5 gal. (850 L)	106 in. (269.24 cm)	74 in. (188 cm)	36 in. (91.4 cm)	8 in. (20.3 cm)	10
VC-40	40 ft <sup>3</sup> (1.13 m <sup>3</sup> )	297.2 gal. (1,125 L)	113 in. (287.02 cm)	77 in. (195.6 cm)	36 in. (91.4 cm)	8 in. (20.3 cm)	15
VC-50	50 ft <sup>3</sup> (1.41 m <sup>3</sup> )	369.8 gal. (1,400 L)	117 in. (297.2 cm)	79 in. (201 cm)	36 in. (91.4 cm)	8 in. (20.3 cm)	15
VC-60	60 ft <sup>3</sup> (1.70 m <sup>3</sup> )	449.1 gal. (1,700 L)	123 in. (312.4 cm)	83 in. (210.8 cm)	36 in. (91.4 cm)	10 in. (25.4 cm)	20
VC-75	75 ft <sup>3</sup> (2.12 m <sup>3</sup> )	561.4 gal. (2,125 L)	128 in. (325.1 cm)	85 in. (215.9 cm)	36 in. (91.4 cm)	10 in. (25.4 cm)	25

### Simple. Effective. Clean.

The V Cone Blender is a simple tumble mixer designed to quickly blend materials. The V shape design allows the blender to rotate on its axis to achieve even and consistent mixtures without the use of internal moving parts. This design prevents the accumulation of product over time, which can be a costly and time-consuming issue to address.

### Other Features:

- Sanitary design featuring food-grade materials
- Optional extended cone for thorough blending
- Optional intensifiers to break things up quickly
- Guards and barriers for operator safety
- Minimized vibration using sand ports in stand
- Comparable price point for higher quality
- Customizable design to meet application-specific requirements
- Chopper options to blend and disperse in same machine



# MARION

## Double-Cone Blender



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Information

*Rapid, low-impact mixing at its best for  
abrasive solids and semi-dry materials.*

Marion Double-Cone Blenders use revolution and a simple design to promote highly uniform mixes - especially with abrasive solids and semi-dry materials.



Rapid, Low-Impact  
Blending



No Moving Parts Means Less  
Maintenance and Cleaning



Easy Discharge and  
Drainage

### Ideal Machine For

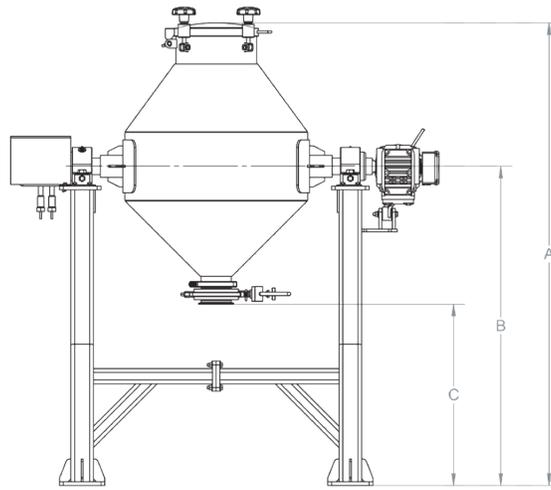
- Blending product with other trace materials, abrasive solids and semi-dry materials
- Batch Mixing
- Delumping



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## Double-Cone Blender Specifications

Model Number	Working Capacity (ft <sup>3</sup> )	Working Capacity (L)	Inlet Height (A)	Centerline Height (B)	Discharge Height (C)	Inlet Diameter	Discharge Diameter	HP
DC-.25	.25 ft <sup>3</sup> (.007 m <sup>3</sup> )	1.8 gal. (7 L)	24 in. (61 cm)	34 in. (86.4 cm)	24 in. (61 cm)	6	4	0.75
DC-.50	.5 ft <sup>3</sup> (.014 m <sup>3</sup> )	3.7 gal. (14 L)	45 in. (114.3 cm)	36 in. (91.4 cm)	24 in. (61 cm)	6	4	1
DC-1.5	1.5 ft <sup>3</sup> (.042 m <sup>3</sup> )	10.6 gal. (40 L)	53 in. (134.6 cm)	40 in. (101.6 cm)	24 in. (61 cm)	8	4	1.5
DC-2.5	2.5 ft <sup>3</sup> (.071 m <sup>3</sup> )	18.5 gal. (70 L)	62 in. (157.5 cm)	43 in. (109.2 cm)	24 in. (61 cm)	10	4	2
DC-5	5 ft <sup>3</sup> (.14 m <sup>3</sup> )	37 gal. (140 L)	69 in. (175.3 cm)	47 in. (119.4 cm)	24 in. (61 cm)	10	4	3
DC-10	10 ft <sup>3</sup> (.28 m <sup>3</sup> )	72.6 gal. (275 L)	91 in. (231.1 cm)	63 in. (160 cm)	36 in. (91.4 cm)	18	6	5
DC-20	20 ft <sup>3</sup> (.57 m <sup>3</sup> )	145.3 gal. (550 L)	104 in. (264.2 cm)	70 in. (177.8 cm)	36 in. (91.4 cm)	18	8	10
DC-30	30 ft <sup>3</sup> (.85 m <sup>3</sup> )	224.5 gal. (850 L)	112 in. (284.5 cm)	75 in. (190.5 cm)	36 in. (91.4 cm)	18	8	10
DC-40	40 ft <sup>3</sup> (1.13 m <sup>3</sup> )	297.2 gal. (1,125 L)	117 in. (297.2 cm)	79 in. (200.7 cm)	36 in. (91.4 cm)	18	8	15
DC-50	50 ft <sup>3</sup> (1.41 m <sup>3</sup> )	369.8 gal. (1,400 L)	123 in. (312.4 cm)	82 in. (208.3 cm)	36 in. (91.4 cm)	18	8	15
DC-60	60 ft <sup>3</sup> (1.70 m <sup>3</sup> )	449.1 gal. (1,700 L)	129 in. (327.7 cm)	84 in. (213.4 cm)	36 in. (91.4 cm)	18	10	20
DC-75	75 ft <sup>3</sup> (2.12 m <sup>3</sup> )	561.4 gal. (2,125 L)	136 in. (345.44 cm)	88 in. (223.5 cm)	36 in. (91.4 cm)	18	10	25

### Efficient. Sanitary. Simple.

Blend efficiently and cleanly with a Marion Double-Cone Blender, which uses a straightforward double cone design that employs rotation and gravity to blend materials. No moving parts means less time and money needed on maintenance. The configuration can include load cells to weigh incoming materials for high precision blends.

#### Other Features:

- Sanitary design featuring food-grade materials
- Optional intensifiers to break things up quickly
- Guards and barriers for operator safety
- Minimized vibration using sand ports in stand
- Comparable price point for higher quality
- Chopper options to blend and disperse in same machine

# MARION

## WaveMix™



Scan For More Information

### Shorten processing time from hours to minutes.

With the ability to operate under vacuum, pressure and nitrogen blanket, the versatility of the WaveMix™ industrial drying system is unmatched by any other thermal processing equipment.



Preserves Color, Nutritional and Chemical Value of Materials



Quick, Efficient Drying  
Eliminates Material Loss



Sanitary, Easy-Clean Design

### Ideal Machine For

- Drying
- Processing
- Low Temperature Drying
- Change of State
- Mixing
- Powder-Drying
- Solvent Removal
- Extracting
- Heating
- Microbial Reductions
- Dehydrating
- Roasting



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## WaveMix™ Specifications

Capacity	60 ft <sup>3</sup> (18.3 m <sup>3</sup> )	100 ft <sup>3</sup> (30.5 m <sup>3</sup> )	200 ft <sup>3</sup> (61 m <sup>3</sup> )	400 ft <sup>3</sup> (121.9 m <sup>3</sup> )
Material Temperature Degree	145-165 °F 62.78-73.89 °C	145-165 °F 62.78-73.89 °C	145-165 °F 62.78-73.89 °C	145-165 °F 62.78-73.89 °C
Maximum Machine Temperature Degree	350 °F 176.67 °C	350 °F 176.67 °C	350 °F 176.67 °C	350 °F 176.67 °C
Temperature Sensor	Infrared & RTD Measurement	Infrared & RTD Measurement	Infrared & RTD Measurement	Infrared & RTD Measurement
Machine Materials	T304 Stainless Steel	T304 Stainless Steel	T304 Stainless Steel	T304 Stainless Steel
Electrical Requirements	3PH 480V 50/60Hz	3PH 480V 50/60Hz	3PH 480V 50/60Hz	3PH 480V 50/60Hz
Initial Wet Material Weight (75% moisture)	600 lbs. (272.2 kg)	1,000 lbs. (453.6 kg)	2,000 lbs. (907.2 kg)	3,000 lbs. (1,360.7 kg)
Rate of Water Removal	188 lbs. (85.3 kg)/hr	187.5 lbs. (85.0 kg)/hr	375 lbs. (170.1 kg)/hr	749.7 lbs. (340.1 kg)/hr
Final Dry Material Weight (10% moisture)	167 lbs. (75.7 kg)/hr	298 lbs. (135.2 kg)/hr	556 lbs. (252.2 kg)/hr	883 lbs. (400.5 kg)/hr
Total Dry Time (hrs)	2.3	3.85	3.85	2.89
Average Applied Power (kW)	80	80	160	320
Dried Material Rate	72.5 lbs. (32.9 kg)/hr	72.2 lbs. (32.7 kg)/hr	144.3 lbs. (65.5 kg)/hr	288.3 lbs. (130.6 kg)/hr
Power Density (W/lb)	133.3 W/lbs. (293.2 W/kg)	80 W/lbs. (176.4 W/kg)	80 W/lbs. (176.4 W/kg)	106.7 W/lbs. (233.7 W/kg)

### Cost-Effective. Fast. Precise.

The WaveMix™ enables the safe drying of sensitive materials, while maintaining their color, nutritional value, and chemical integrity. This advanced system incorporates microwave, vacuum, and mixing technologies, along with precise temperature controls, to prevent any loss of product due to case hardening, burning, overprocessing, or underprocessing.

#### Other Features:

- Doesn't heat to dangerous temperatures
- Nitrogen purging eliminates fire and explosion risk
- Tight control over temperature
- Improved batch consistency

# MARION

## Lump Breaker



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### *Reduce particle size without causing dust and fines.*

The Marion Lump Breaker helps break down products prone to agglomeration and clumping by grinding solids down for further processing. Its compact, low-power and easy-to-clean design ensures inexpensive operation and little downtime between product changes.



Consistent Particle Size for Product Uniformity



Sanitary, Easy-Clean Design with Easily Removable Replaceable Parts



Easy Integration into Existing Production Lines

### Ideal Machine For

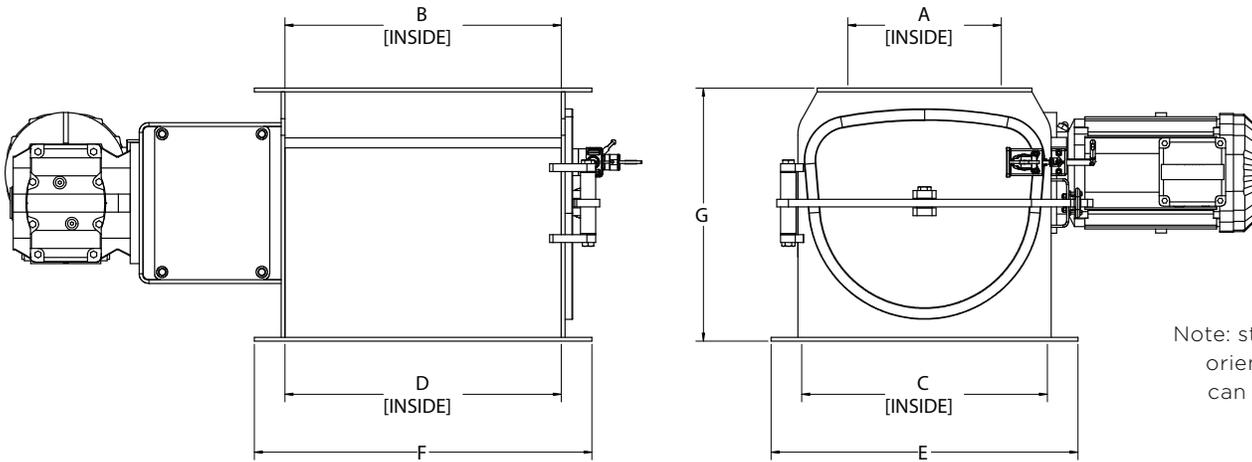
- Breaking
- De-Agglomeration
- Reducing
- Grinding
- De-Clumping
- Sizing



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Note: standard motor orientation shown, can vary based on application

## Lump Breaker Specifications

Model Number	Screen Diameter	Inlet Width (A)	Inlet Width (B)	Outlet Width (C)	Outlet Width (D)	Largest Flange Width (E)	Largest Flange Width (F)	Overall Height (G)	HP	*Maximum Throughput (ft <sup>3</sup> /min)
LB-250	10 in. (25.4 cm)	10 in. (25.4 cm)	18 in. (45.7 cm)	16 in. (40.6 cm)	18 in. (45.7 cm)	20 in. (50.8 cm)	22 in. (55.9 cm)	16.5 in. (41.9 cm)	5	4 ft <sup>3</sup> (.11 m <sup>3</sup> )/minute
LB-350	14 in. (35.6 cm)	14 in. (35.6 cm)	18 in. (45.7 cm)	20 in. (50.8 cm)	18 in. (45.7 cm)	24 in. (61.0 cm)	22 in. (55.9 cm)	20.5 in. (52.1 cm)	10	6 ft <sup>3</sup> (.17 m <sup>3</sup> )/minute
LB-450	18 in. (45.7 cm)	18 in. (45.7 cm)	22 in. (55.9 cm)	26 in. (66.0 cm)	22 in. (55.9 cm)	30 in. (76.2 cm)	26 in. (66.0 cm)	24.5 in. (62.2 cm)	15	10 ft <sup>3</sup> (.28 m <sup>3</sup> )/minute
LB-550	22 in. (55.9 cm)	22 in. (55.9 cm)	22 in. (55.9 cm)	30 in. (76.2 cm)	22 in. (55.9 cm)	34 in. (86.4 cm)	26 in. (66.0 cm)	28.5 in. (72.4 cm)	20	12 ft <sup>3</sup> (.34 m <sup>3</sup> )/minute

\*Actual throughput will depend on material properties and screen mesh size

## Efficient. Consistent. Dependable.

Prepare your products for the next processing step with Marion's Lump Breaker. This versatile machine breaks down, grinds, and reduces clumping or agglomeration in a range of applications, both before and after mixing in any production system. With its customizable and sanitary design, the Lump Breaker saves on maintenance costs and time while ensuring an extended lifespan.

### Other Features:

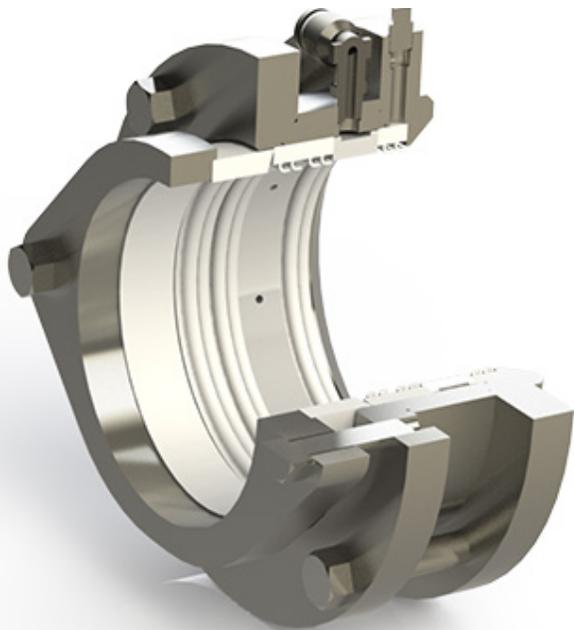
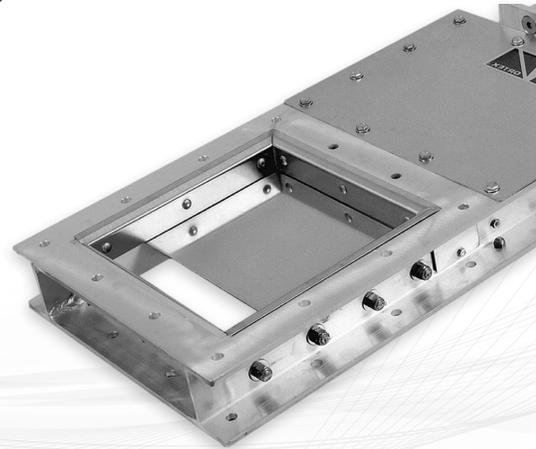
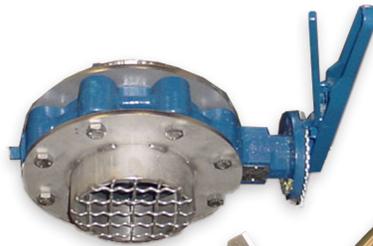
- Low power consumption
- Customizable hatches, loading hoppers and floor stands
- Available to meet food, pharmaceutical, and industrial safety and sanitary standards
- Long life with easily replaceable parts
- Multiple mesh sizes available
- No special tools required for maintenance

# MARION Aftermarket Parts & Service

## Get Parts to Run Your Equipment Better, Longer

Marion offers replacement parts for agitators, motors, and other components that undergo wear and tear over time. We offer parts and service to pre-existing Marion and non-Marion machines and mixers. Whether you need new doors, gaskets, seals, agitators or motors, Marion delivers the highest level of service to optimize your equipment.

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### Replacement Parts Include:

- Agitators
- Bag Dumps
- Bearings
- Blades
- Choppers
- Covers/Doors
- Controls
- Discharge Valves
- Drive Trains
- Fluidizing Agitators
- Gaskets
- Hoppers
- Hybrid Paddle/Ribbon Agitators
- Injection Manifolds
- Load Cells
- Motors
- Paddle Agitators
- Ribbon Agitators
- Seals
- Trough Liners



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# HOW MARION MAKES THINGS EASY FOR YOU



**Preventative Maintenance**  
Avoid Expensive Repairs  
and Downtime



**Equipment Optimization**  
Make Cost-Saving  
Efficiency Adjustments



**Installation Supervision**  
Eliminate Costly  
Pre-Production Errors



**Operator Training**  
Educate Staff on Running and  
Maintaining Equipment



**Commissioning Equipment**  
Certify Your Equipment Meets  
Specifications



**Refurbishment and Retrofits**  
Repair or Upgrade Your  
Equipment



## INTERESTED IN TESTING YOUR APPLICATION WITH MARION?

Ask about our Iowa, Germany or UK-based facilities, where you can test your application in our equipment before you buy. Our experienced application engineers help you get the most out of your process and provide quality analysis to show you're getting a dependable machine.



Scan the QR code to learn more about Marion's Testing Services.