

# VacuShear<sup>®</sup>

SANITARY VACUUM LIQUI-PROCESSOR



## HOW THE VacuShear DELIVERS

### ROTOSOLVER<sup>®</sup>

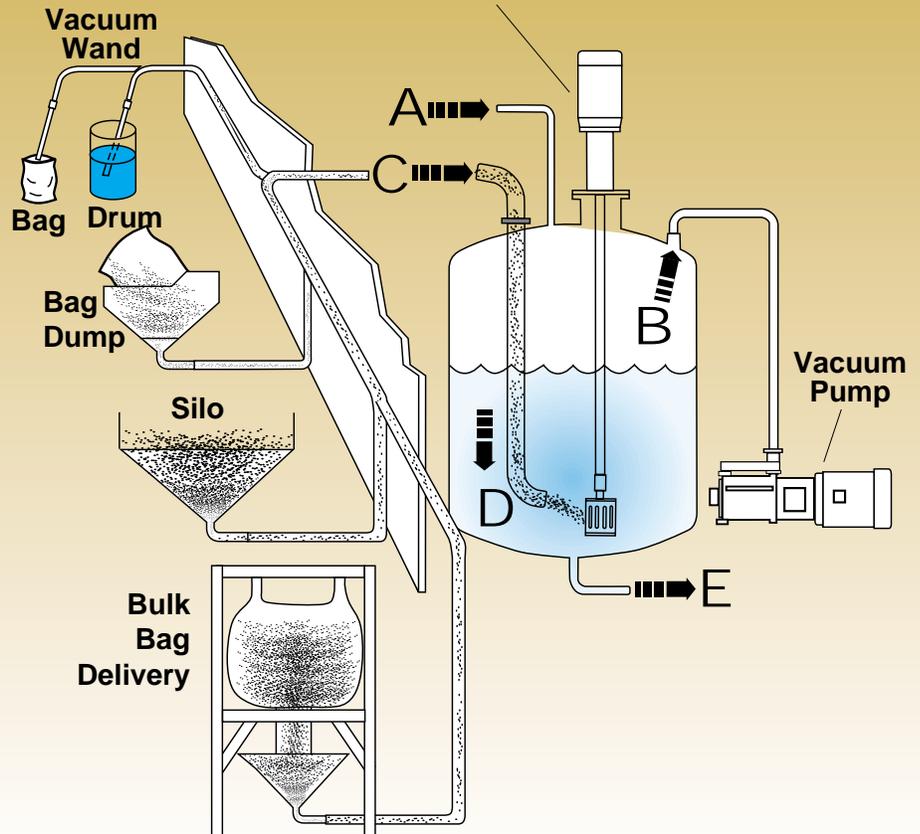
**(A)** Liquid materials are introduced into the mix tank to a level of 1/3 to full batch height. The Rotosolver is turned on from the mixer control panel.

**(B)** The vacuum pump is engaged, whereby vacuum builds in the tank, providing positive suction at the in-tank delivery tube.

**(C)** Dry powders, solids, semi-solids or liquids are introduced via the vacuum delivery system directly from bags, drums, bag dump stations or loss-in-weight feeders. A unique benefit is the ability to store and convey all materials from a remote, dry area and avoid messy clean-ups of typical powder additions. Powder feed rates exceeding 500 lbs/min will automatically occur as vacuum is maintained.

**(D)** All dry materials are introduced below the liquid level immediately at the mixing head. Constant vacuum eliminates aeration, foaming and dusting commonly generated by conventional processors.

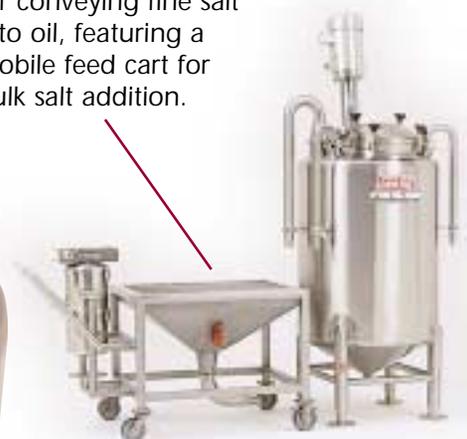
**(E)** Once charging is complete and isolation valves are closed, the Rotosolver can be shut off or slowed down, while vacuum is maintained to allow complete de-aeration and de-foaming to occur. When all parameters are satisfied, the tank can be unloaded under atmospheric conditions.



### VacuShear options include:

- Double mechanical sanitary, dry running seals
- <sup>®</sup> Design pedestal mount
- Pneumatic vacuum pumps
- Water recovery for liquid ring pump
- Cone bottom for high viscosity products
- Vacuum wand assemblies
- Momentary trigger for remote wand operation
- Multi-tank systems
- Intank detachable shaft couplings
- Clean-in-place (CIP) sprayball assembly
- Sight glass
- Tank access platforms
- Temperature & level sensors
- Sweep and scraped surface agitation
- Baffles - fixed or removable
- Complete turnkey installation
- Bag dump stations and bulk bag unloaders
- Process automation with load cell batching or loss-in-weight controls

**VacuShear** Designed for conveying fine salt into oil, featuring a mobile feed cart for bulk salt addition.



# THE VacuShear DESIGN ADVANTAGE

## STANDARD DESIGN FEATURES



### ROTOSOLVER® Disperser

- Approved One-Piece High Shear Head for CIP Applications
- Completely Sealed All Stainless Bearing Frame with Vacuum Flange
- No Wearing Parts in the Product Zone
- Optional All Stainless Motors
- Optional Speed Controllers for Shear Adjustment
- Mixer Options Include Rotostat Emulsifiers and Rotomixx Sanitary Agitators



### Vacuum Processor

- Approved 304 or 316L Stainless Steel Construction
- Easy Access Sanitary Bottom Discharge Without Interference from Drives, Seals
- and ASME Facilities
- Integrated System Capabilities
- Design / Build System Installations
- Professional Engineering and Design

The VacuShear is manufactured to meet specific needs and requirements. The following table provides data on standard models, and the ultimate model will be affected by powder bulk density, slurry viscosity, conveying distances and rates. Please request our VacuShear Quote Questionnaire to receive a detailed proposal for your application.

## SELECTION TABLE

| MODEL                         | VS-050  | VS-100  | VS-200   | VS-300   | VS-500    |
|-------------------------------|---------|---------|----------|----------|-----------|
| TYPICAL BATCH SIZE (GALS)     | 20-50   | 50-100  | 100-200  | 150-300  | 250-500   |
| TYPICAL HORSEPOWER RANGE (HP) | 5-15    | 10-20   | 10-30    | 15-30    | 20-40     |
| MODEL                         | VS-600  | VS-750  | VS-1000  | VS-1500  | VS-2500   |
| TYPICAL BATCH SIZE (GALS)     | 300-600 | 350-750 | 500-1000 | 750-1500 | 1250-2500 |
| TYPICAL HORSEPOWER RANGE (HP) | 25-40   | 25-50   | 30-50    | 40-60    | 50-75     |

## FEATURES AND BENEFITS

### 1. Eliminates Entrained Air and Foaming While Mixing

Vacuum introduction of dry ingredients reduces the generation of air and foam within the process, followed by de-aeration as vacuum is maintained.

### 2. Eliminates Bottom Seal

Top entry high shear Rotosolver® completely eliminates high maintenance found with conventional bottom entry liqui-processors. No bottom bearings or seals. No complicated orientation of drive and mixer at tank outlet.

### 3. Dust Free Environment Reduces Safety Hazards

Dry ingredient hoppers, dump stations and wands are engineered to reduce or eliminate dusting typical of bag feeding.

### 4. Ergonomic, Efficient and Sanitary

Waist high or ground level vacuum feed stations reduce back strain and climbing accidents while eliminating paper/plastic scraps from falling into the batch.

### 5. Eliminates Manual Delivery of Powders

The vacuum system provides hands free conveying of materials while the vacuum tank maintains positive suction directly into the mixing head.

# VacuShear

## APPLICATIONS

Only the **VacuShear** can exclusively provide aeration-free & foam-free mixing, plus easy vacuum conveying of these dry, hard-to-handle ingredients and applications:

- ✓ Ice Cream Mixes
- ✓ Caseinates
- ✓ Modified Food Starch
- ✓ Powdered Eggs, Albumin
- ✓ Xanthan & Guar Gum
- ✓ Whey Solids, Milk Solids
- ✓ Non-Fat Dry Milk Powder
- ✓ Yogurt Pre-Mix
- ✓ Vitamin Dispersions
- ✓ Whipped Toppings
- ✓ Cocoa Powders
- ✓ Gelatin
- ✓ Salad Dressings, Sauces
- ✓ Fumed Silica Powder
- ✓ Oil Phase Emulsions



The partnership of Admix, Inc. and A&B Process Systems provides a level of project and process design expertise and capability greatly exceeding what a single source supplier can achieve. Together, our two companies can provide our customers greater efficiency and flexibility that is hard to capture from a single service provider.

Our mixing technology ranges from high speed emulsification of powders into immiscible liquids, to simple blending of newtonian fluids. Our conveying expertise allows us to utilize state-of-the-art vacuum pumps, powder feeders, hoppers and dump stations to provide the most cost effective and ergonomic means to charge your products into the mix tank.

A&B Process Systems synergistic team of engineers, integrators, ASME fabricators and installers enables the client to explore efficiencies before and after the mixing station in their process application.

Our systems capability allows us to link mixing and conveying technologies to a fully intergrated and automated installation with 100% assurance and reliability.

# VacuShear

## INSTALLATIONS

The following leading companies are using **VacuShear Technology:**

Beech-Nut Nutrition Corporation

Campbell Soup Company

Eastman Kodak Company

General Mills, Inc.

Golden Valley Microwave Foods, Inc.

Kraft Foods, Inc.

Nestlé USA, Inc.

The Quaker Oats Company

Tootsie Roll Industries, Inc.

Vlasic Foods International, Inc.

Wella Manufacturing of Virginia, Inc.



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