



**aec**



**Blending** | Conveying | Drying  
Process Cooling | Heat Transfer | Size Reduction

# BD SERIES BLENDERS

Batch Weigh Blenders



*Unmatched Mixing Performance*

*Proven Reliability & Quality*

*Precision Control*

*Operator Friendly*

BD Series Batch Weigh Blenders integrate advanced technologies with proven component design to offer an accurate and innovative blending solution.

[www.aecinternet.com](http://www.aecinternet.com)

# Unmatched Mixing Performance

Providing optimum mixing & blending consistency.

Newly designed paddle achieves industry leading mix quality, which virtually eliminates dead zones by pulling material out of the corners, delivering the most consistent batch-to-batch blended mix.

# Proven Reliability & Quality

Durability driving performance.

AEC's exclusive weigh hopper design eliminates fatigue points, improves reliability, and delivers consistent solid performance.

# Precision Control

Smart controls for a smarter facility.

Upgraded 7" HMI color touch screen display & Ethernet Connectivity.  
Remotely monitor & control,  
or collect data for an existing SCADA system.

# Operator Friendly

Ergonomic design - equipped with convenience.

Regular cleaning maintenance requires no tools.  
Reliable safety-interlock system disables both  
compressed air & power if the mixer door is opened.

# BD SERIES BLENDERS

## Consistent, Accurate Batch Blending

**BD Series Batch Weigh Blenders integrate advanced technologies with proven component design to offer an accurate and innovative blending solution.**

Batch weigh blending operators know that flexibility and accuracy are key to success. BD Series Blenders feature an exclusive diamond slide gate metering assembly that provides 0.5% to 100% recipe range accuracy for free flowing materials.

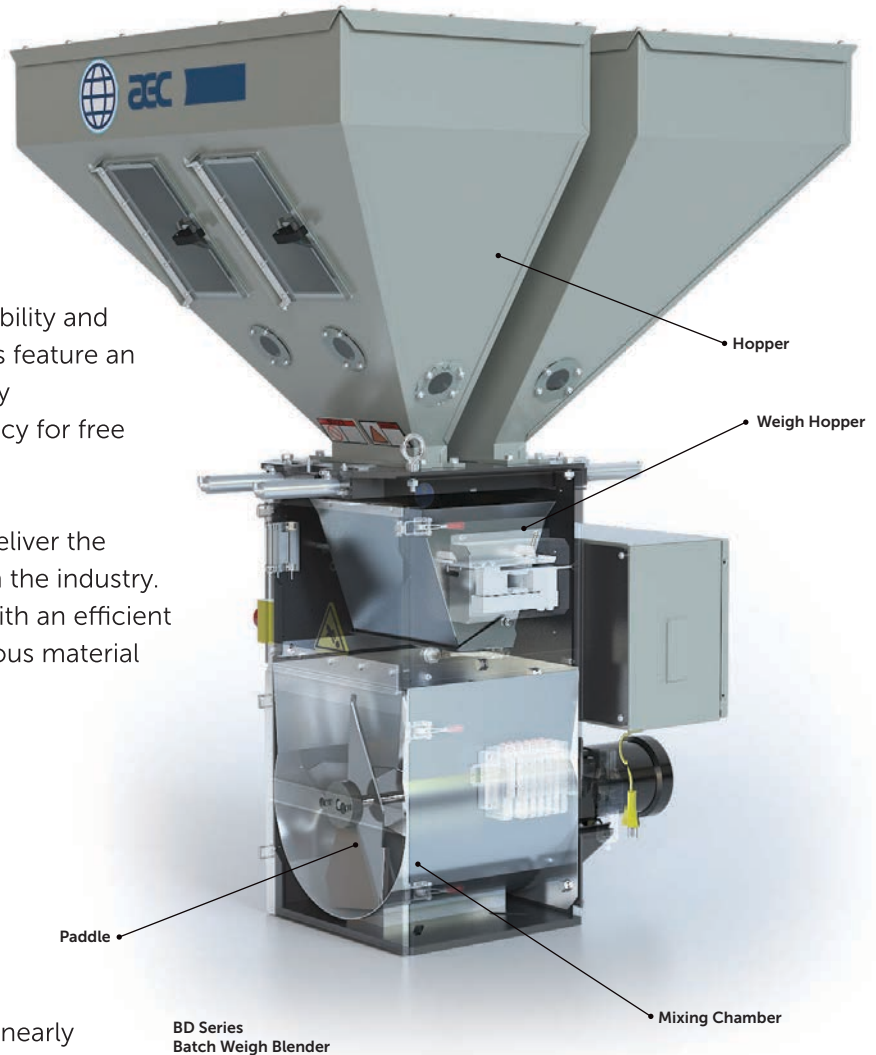
In addition, state-of-the-art process controls deliver the most consistent batch-to-batch blended mix in the industry. Heavy-duty modular construction combined with an efficient industrial mixing chamber help ensure continuous material flow and the right mix every time.

**Reliable and versatile blending technology to meet the needs of today's complex processes.**

- 1. Durable** – Modular and rugged withstands nearly any production floor environment.
- 2. Innovative** – Intuitive touch screen control interface with color coded functions.
- 3. Accurate** - Gravimetric weighing ensures the exact amount of material is dispensed - *Every Time*.



**Tech Tip:** *During cleaning, it is a great time to recalibrate load cells with the provided calibration weights.*



BD Series  
Batch Weigh Blender

### Applications

This series of batch weigh blenders is suitable for a wide range of materials and plastic manufacturing needs. Typical applications include, but are not limited to, the following:

- Injection molding
- Blow molding
- Extrusion
- Roto-molding
- Regrind/Recycling
- Thermoforming

*Available as machine mount or as a central blender.*

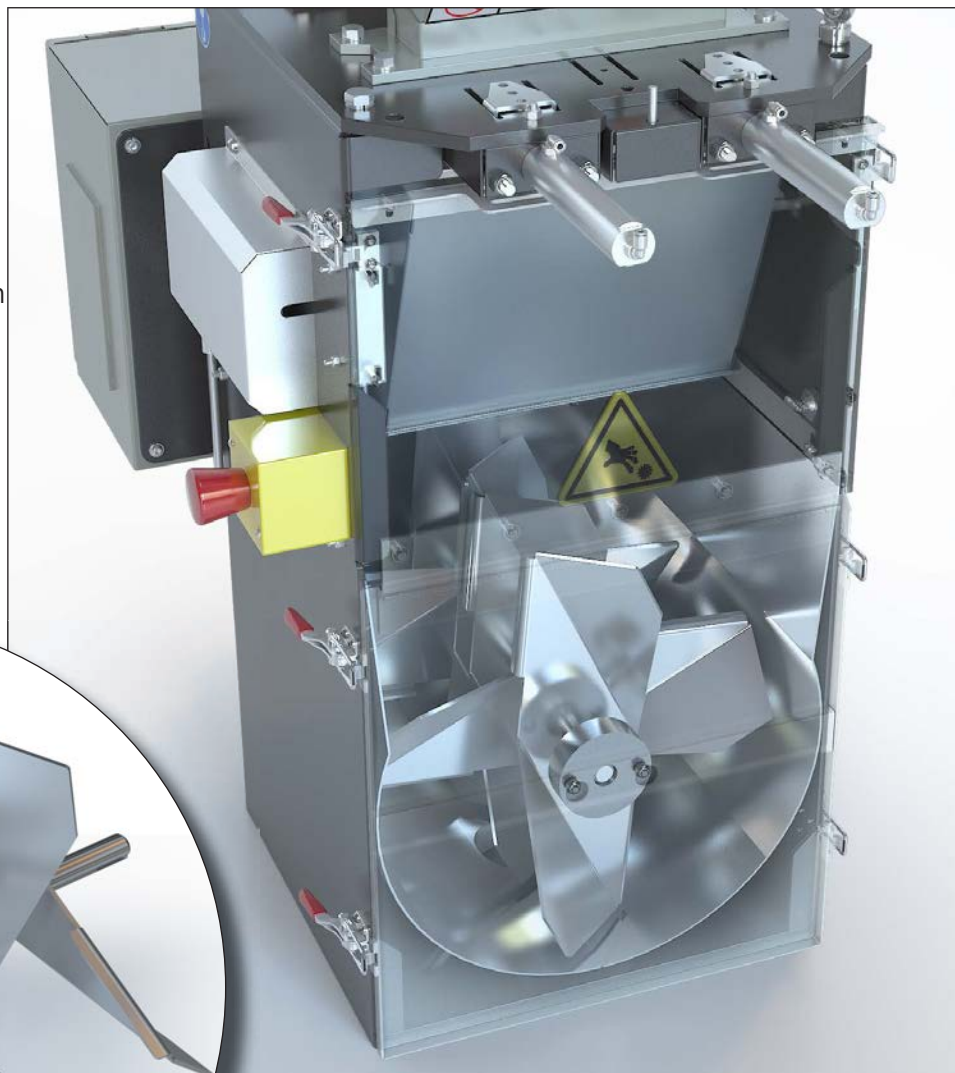
# BD SERIES BLENDERS

## Unmatched Mixing Performance

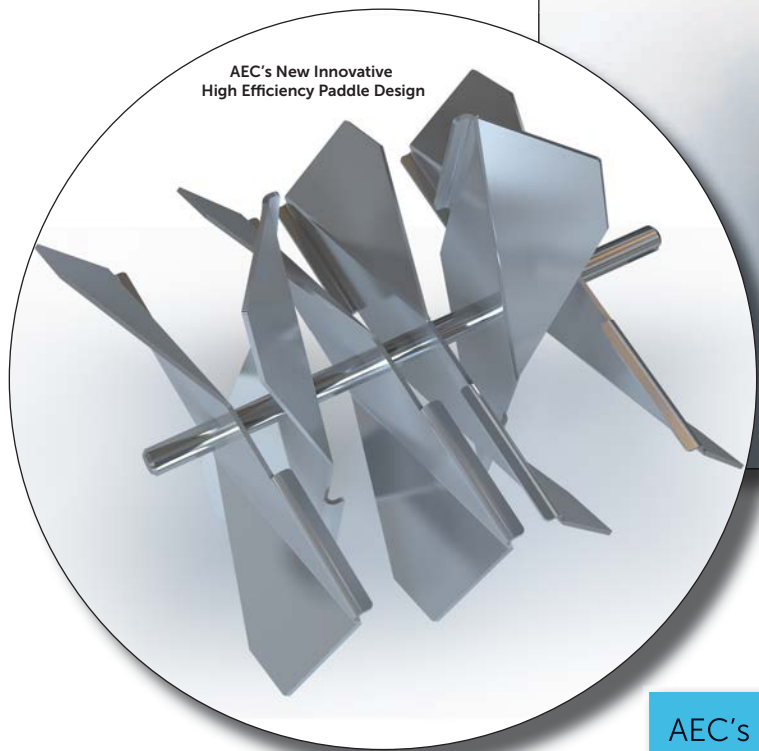
### Providing optimum mixing and unmatched consistency

The BD Blender delivers the most consistent batch-to-batch blended mix in the industry, improving product quality and reducing material waste.

Extensive testing and validation has proven that AEC's new paddle design delivers uninhibited material flow throughout the mixing chamber providing unmatched mixing performance.



AEC's New Innovative  
High Efficiency Paddle Design



AEC's new paddle design has six fan-shaped blades, featuring proprietary geometry that pulls material from the corners, virtually eliminating dead zones.

## Competitive Benchmark Testing

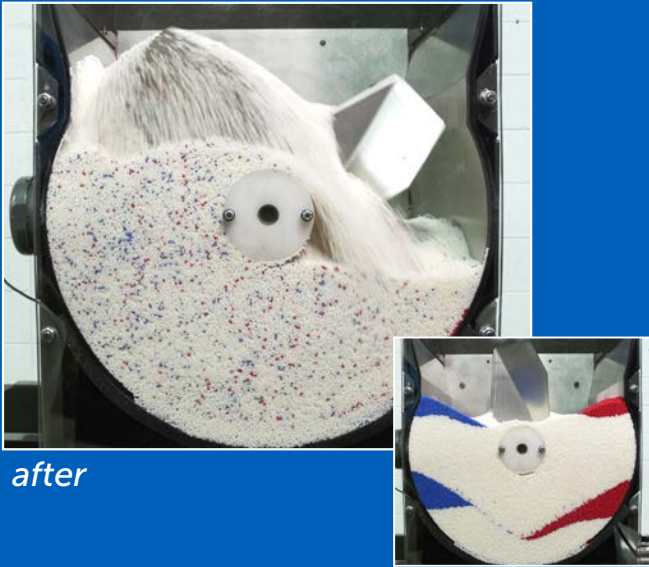
1. Colored pellets placed in known dead zones.
2. Mixed for 15 seconds.
3. AEC achieves a homogeneous mixture up to 4x faster.

AEC reduces blending time and virtually eliminates dead zones



**New Paddle Design**

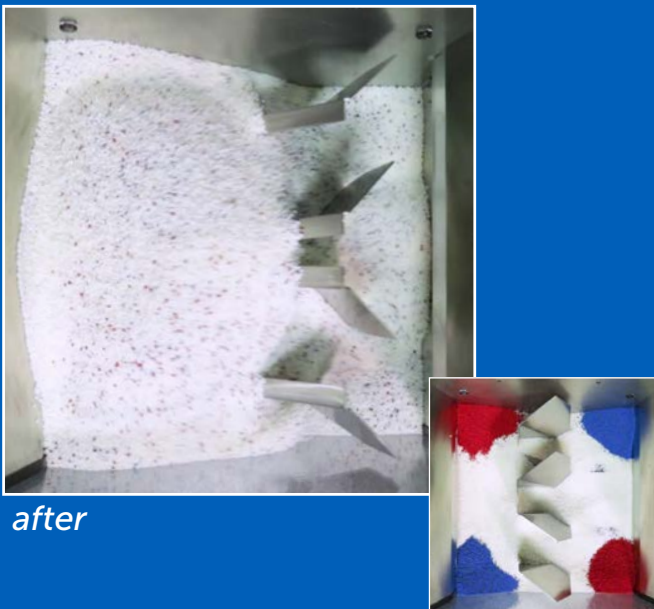
Side View



*after*

*before*

Top View

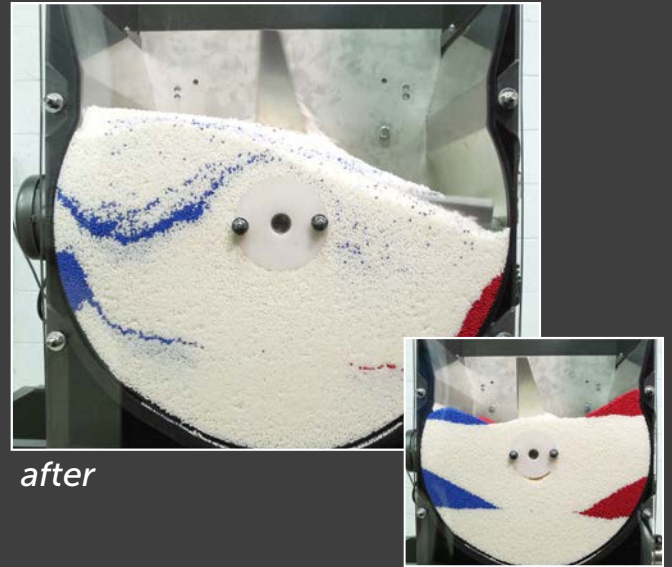


*after*

*before*

**Industry Standard Paddle**

Side View



*after*

*before*

Top View



*after*

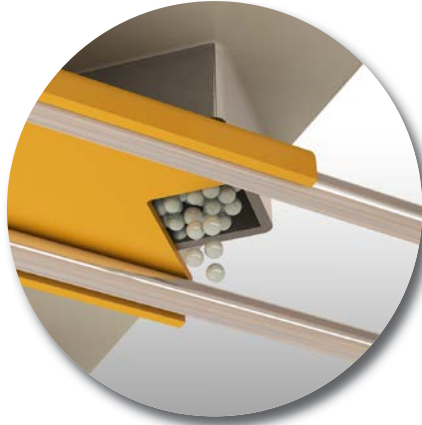
*before*

# BD SERIES BLENDERS

## Consistent, Accurate Batch Blending

### Precision Metering with Diamond Slide Gate Design

The newly designed diamond slide gate is stronger and more reliable than ever. AEC has combined this gate with a new processor that is 7x faster than previous models, allowing the BD Blender to dispense as few as 5 pellets per pulse ensuring extreme accuracy.



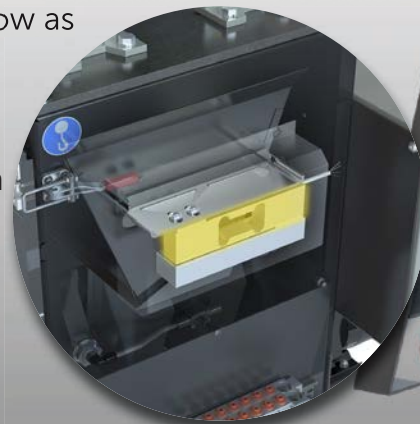
### Weigh Hopper

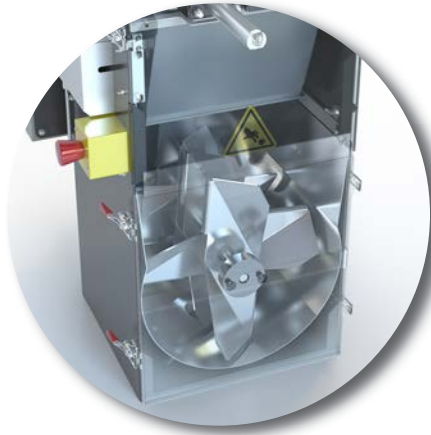
Pellets and regrind flow from the slide gates into a stainless steel weigh hopper. The weigh hopper features rivet nuts at the hopper pivot location, eliminating fatigue points, and delivering smooth, consistent performance.

### Gravimetric Weighing

A stainless steel weigh hopper is mounted on a pair of externally mounted load cells that are able to accurately weigh in increments as low as 1/1000th of a pound.

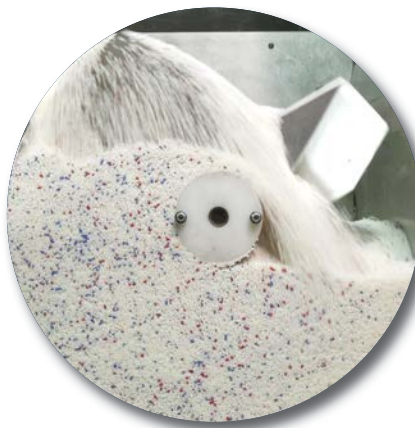
The weigh hopper is easily removed for material cleaning and calibration of the load cells.





### Mixing Chamber

After all materials have been weighed, the weigh bin releases the material into the mixing chamber and the mixing process begins. Material is mixed thoroughly to ensure a homogeneous blend of material.



### Unmatched Mixing Performance

AEC's new proprietary mixing paddle virtually eliminates mixing chamber dead zones, and achieves a homogeneous mixture up to 4x faster than the industry standard, which improves product quality and reduces material waste.

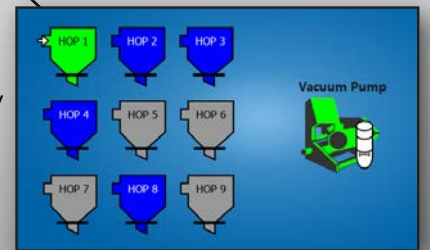


### Advanced Controls

New high resolution 7" color touch screen and optimized graphical interface highlight AEC's industry proven control platform.

### 9 Station Loading Control

New integrated loading control option allows the BD Blender to load up to 8 hoppers and convey to a process machine.



# BD SERIES BLENDERS

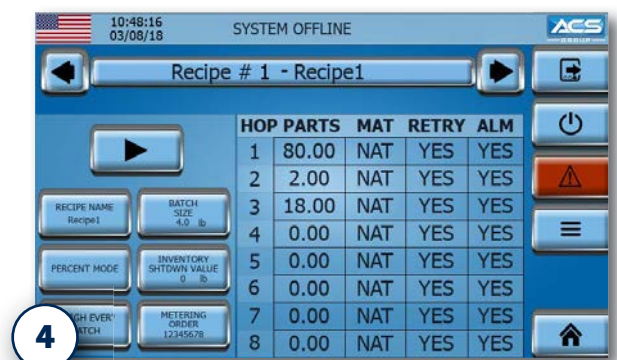
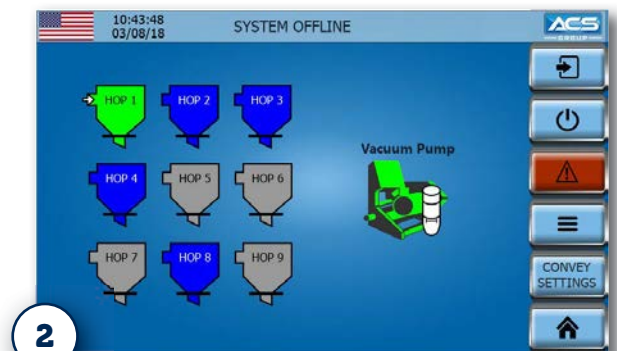
## Intuitive Controls

### Complete System Access via Robust, Easy-To-Use Display

This next generation of the BD Series Blender builds on over 20 years of expertise in batch blender controls. A new high-resolution 7" color touch screen and optimized graphical interface highlight AEC's industry proven control platform.

The large color touch screen conveys a wide array of critical data points including:

- Blender rate capacity
- Production process rate
- Individual and cumulative material usage
- Target vs. actual batch weights

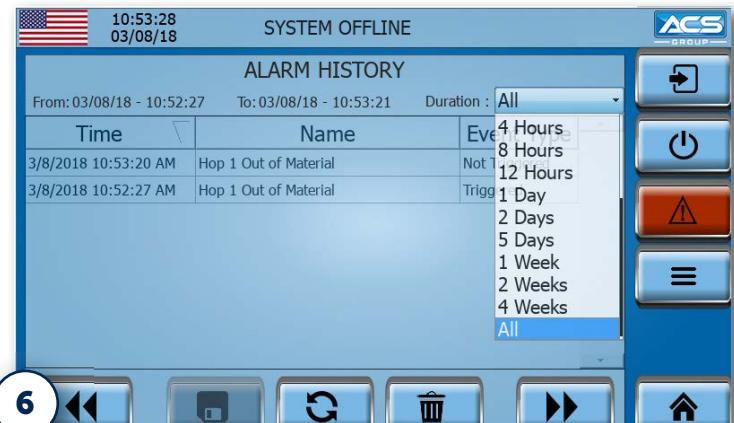


- Blender Home Screen**  
Visual representation of the entire blender system to quickly and easily see the current recipe, operation mode, and the weight of the current batch.
- 9 Station Loading Control (optional)**  
Control a vacuum pump to load up to 8 hoppers and convey to a single process machine.
- Inventory Statistics**  
Quickly see the average batch time and current pounds per hour process rate to identify throughput targets.
- Recipe Book**  
Enter and store up to 100 unique recipes.

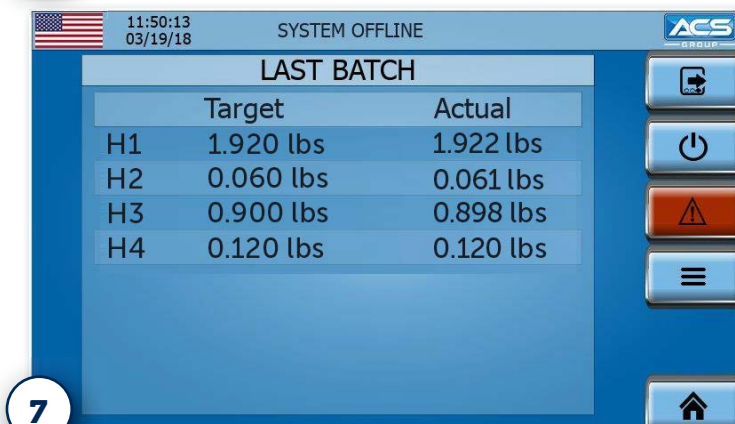




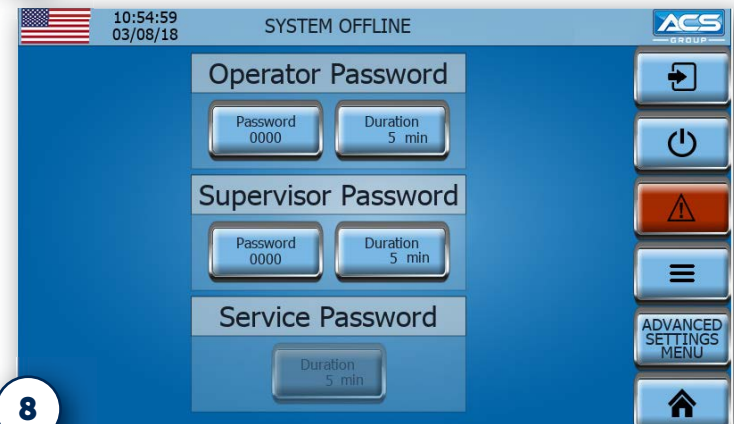
5



6



7



8

**5 Manual/Cleanout Mode**  
Manual operating mode is great for troubleshooting diagnostics and material cleanout.

**7 Last Batch Statistics**  
Easily view the last batch target vs. actual batch for each hopper.

**6 Alarm Log**  
Quickly view and export current or past alarms. System capabilities also allow e-mail alerts for critical functions.

**8 Multi-Level Password Protection**  
Provides custom protections that maximize security and manufacturer's uptime. Temporary service passwords can be entered during service phone support.

## Smart Controls for a Smarter Facility

- Remotely monitor and control the blender 24/7 via phone, tablet, or PC.
- Enabled to seamlessly integrate with any smart factory - allowing specific data logging capabilities, inventory usage, batch-to-batch accuracy, and alarm history.
- E-mail alert capability can be enabled to send alarms when specific issues occur, providing immediate visibility to process errors.
- Increased processor speed and proprietary control algorithms ensure predictable and precise batch-to-batch accuracy - *Every Time*.

# BD SERIES BLENDERS

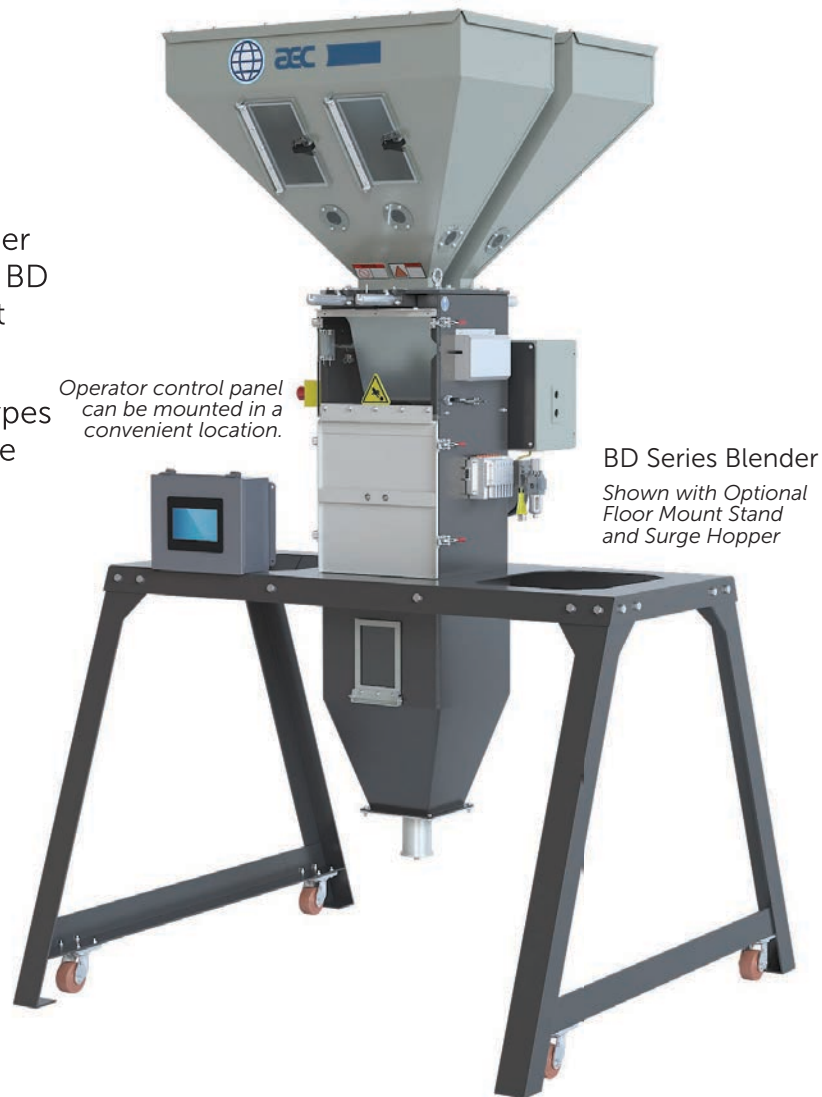
## Configurations

### Choosing a Blender

When determining which BD Series Blender is right for your operation, the first thing to consider is how many materials you intend to blend. The BD Series Blenders can accurately blend up to eight different materials.

The next parameter would be to consider the types of materials you expect to blend. Whether you're blending pellets, regrind or other materials, the BD Blender Series has a configuration to meet your operational requirements.

Finally, each production environment has unique throughput rate needs. With the BD Series, the blending rates range up to 6,000 lbs/hour - a perfect compliment to any production floor.



**Tech Tip:** BD Blenders can be readily mounted to a mezzanine structure, blender stand, or a process machine.

## Options to Help You Get More from Your Production Floor.

### Low Level Proximity Sensors

Located in the material hoppers - notifies you when material is low so that you do not run out of material and starve your process machine.

### Floor Mount Stands

The floor mount stands with integrated take-off box allows you to feed multiple machines from one blender. The advantage of this is economy of scale - one large blender for less than the price of two medium blenders.

### Removable Hoppers

Some models have removable material hoppers for easy color change.

### Drain Tubes

Located at the base of the material hoppers - facilitates easy clean out.

### Bolt-On Additive Feeders

Increase capacity - up to 8 component mixing with rugged industrial strength.

### 9 Station Loading Control

Allows loading of up to 8 hoppers and conveying to a single process machine.

# Specifications

## BD Series Blenders

Model	BD-200	BD-500	BD-900	BD-2500	BD-4000	BD-6000
Max. Blending Rate	200 lbs/hr (90 kg/hr)	500 lbs/hr (227 kg/hr)	900 lbs/hr (410 kg/hr)	2500 lbs/hr (1135 kg/hr)	4000 lbs/hr (1815 kg/hr)	6000 lbs/hr (2725 kg/hr)
Number of Materials to be Blended*	2-4	2-6	2-8	2-8	2-8	2-8
Slide Gate Size: Majors	2.0" (50 mm)	2.0" (50 mm)	2.0" (50 mm)	2.5" (63 mm)	3.0" (76 mm)	3.0" (76)
Slide Gate Size: Minors	1.5" (38 mm)	1.5 (38 mm)	1.5 (38 mm)	2.0 (50 mm)	3.0 (76 mm)	3.0" (76 mm)
Supply Hopper Capacity: Majors	0.7 cu ft (20 L)	1.4 cu ft (40 L)	1.4 cu ft (40 L)	3.0 cu ft (85 L)	7.5 cu ft (212 L)	7.5 cu ft (212 L)
Supply Hopper Capacity: Minors	0.2 cu ft (5 L)	1.0 cu ft (28 L)	1.0 cu ft (28 L)	2.7 cu ft (77 L)	6.0 cu ft (170 L)	6.0 cu ft (170 L)
Weigh Hopper Capacity	0.18 cu ft (50 L)	0.18 cu ft (50 L)	0.38 cu ft (11 L)	0.82 cu ft (23 L)	1.23 cu ft (34 L)	2.17 cu ft (61 L)
Typical Batch Size	4 lbs (1.8 kg)	4 lbs (1.8 kg)	8 lbs (3.6 kg)	25 lbs (11.3 kg)	35 lbs (15.8 kg)	45 lbs (20.4 kg)
Mixer Capacity	0.25 cu ft (7 L)	0.25 cu ft (7 L)	0.56 cu ft (16 L)	1.1 cu ft (31 L)	2.72 cu ft (77 L)	2.72 cu ft (77 L)
Mixer Motor Size	1/6 HP (.12 kW)	1/6 HP (.12 kW)	1/6 HP (.12 kW)	1/3 HP (0.25 kW)	1.0 HP (0.75 kW)	1.0 HP (0.75 kW)
Mixer Speed	21 RPM	21 RPM	21 RPM	22 RPM	22 RPM	22 RPM
Load Cell Capacity	2 @ 3kg	2 @ 3kg	2 @ 10kg	2 @ 10kg	2 @ 15kg	2 @ 15kg
Blender Weight	375 lbs (170 kg)	375 lbs (170 kg)	450 lbs (205 kg)	650 lbs (295 kg)	1100 lbs (500 kg)	1100 lbs (500 kg)
Main Power	115/1/60 (Optional - 230/1/50 or 230/1/60)					
Control Voltage	24 VDC					

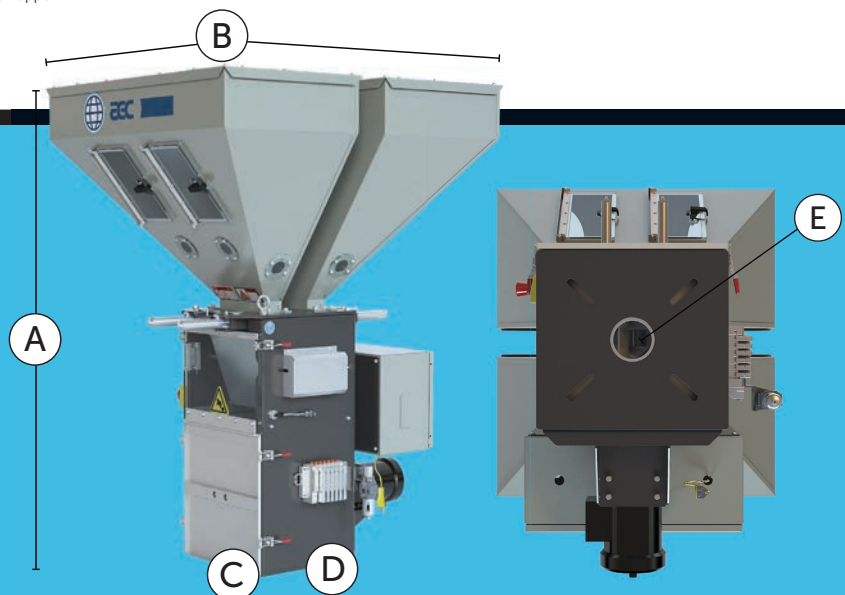
## Dimensions

Model	BD-200	BD-500	BD-900	BD-2500	BD-4000	BD-6000
"A" Overall Height	42.2" (1071 mm)	51.5" (1307 mm)	56.5" (1435 mm)	69.25" (1759 mm)	85.5" (2172 mm)	89.5" (2273 mm)
"B" Square of Top of Bin	32.0" <sup>2</sup> (814 mm <sup>2</sup> )	36.75" <sup>2</sup> (933 mm <sup>2</sup> )	40.0" <sup>2</sup> (1016 mm <sup>2</sup> )	46.25" <sup>2</sup> (1175 mm <sup>2</sup> )	57.5" <sup>2</sup> (1459 mm <sup>2</sup> )	57.25" <sup>2</sup> (1459 mm <sup>2</sup> )
"C" Horizontal Dimensions Bottom Flange	11.0" (279 mm)	11.0" (279 mm)	15.0" (381 mm)	17.0" (432 mm)	22.0" (559 mm)	22.0" (559 mm)
"D" Vertical Dimension of Bottom Flange	12.0" (305 mm)	12.0" (305 mm)	14.0" (356 mm)	18.0" (457 mm)	24.0" (610 mm)	24.0" (610 mm)
"E" Discharge Opening	3.0" (76 mm)	3.0" (76 mm)	3.0" (76 mm)	4.0" (102 mm)	4.0" (102 mm)	4.0" (102 mm)

\* BD-200 available in 2 or 4 component fixed, or 3 component if using the removable hopper.  
BD-500 is only available in 2, 4, 5, or 6 component.

## Regrind Auger Metering Feeder

When hard to flow material such as regrind is required, the BD Series Blenders can be fitted with an optional RAM Feeder (Regrind Auger Metering). The RAM feeder features an agitated surge hopper with a tube auger designed to overcome the unique challenges of material flow.



# Get More From Your Production Floor

AEC brings you all the technologies you need to advance uptime, energy efficiency and performance in your operation. Turn to our technical support team to evaluate your expected system loads and load characteristics, energy and climate-related issues as well as incorporating new equipment with plastics industry equipment you already own.

## AEC History

Application Engineering Company, now known worldwide as AEC has roots dating back to 1957. AEC initially began serving the plastics industry with innovative chiller and cooling tower solutions, and has established itself as the go-to solutions provider for the most challenging process cooling applications. Today, AEC continues to offer a broad portfolio of portable, packaged, and central chillers. AEC supplies innovative solutions and has grown to be a leader in process temperature control, blending, drying, conveying, and size reduction applications in plastic processing, food & pharmaceutical industries.

## Aftermarket Service & Support

AEC has a service network across the United States and in several key international locations. We are focused on having the right people and products in the right places to keep our customers running efficiently. Whether you need On-Site Service, Technical Support & Training, Parts Support or even Product Repair & Refurbishment, we have you covered. Contact our team today for all of your aftermarket needs at 262-641-8600 or [service@acscorporate.com](mailto:service@acscorporate.com).

## About ACS Group

The ACS Group designs, manufactures, markets and supports one of the most comprehensive lines of auxiliary products for the plastics processing industry. Over the years, ACS Group has grown both organically through technical innovation and through acquisition. ACS Group offers an expansive product line, which includes size reduction equipment (granulators and shredders), material conveying equipment, metering and blending devices, heat exchangers (mold temperature controls units and chillers), drying systems, and hydraulic presses.



**ACS Group** | 2900 South 160<sup>th</sup> Street, New Berlin, WI 53151  
**P:** 1.262.641.8600 **E:** [info@acscorporate.com](mailto:info@acscorporate.com) **W:** [acscorporate.com](http://acscorporate.com)