



The Blendcon Homogenizing Blender model is intended for processes where the blend vessel is not completely discharged and homogenizing of a single material is desired. This model is suitable for applications where it is desired to reverse the effects of particle size segregation along the bulk material handling process.

Homogenizes small or large batches

The Blendcon Homogenizing Blender is one of the fastest, most efficient large batch blenders available. It is also suitable for smaller batches. The Blendcon Homogenizing Blender is available in four different models depending on the desired blend batch size. The Blendcon is suitable for batch sizes as small as 5 cubic feet to as large as 10,000 cubic feet. Depending on the bulk material and the Blendcon model, it can blend a 300 cubic foot batch in just four minutes or a 10,000 cubic foot batch in 30 minutes.

By producing large, consistent, homogeneous batches, the Blendcon Homogenizing Blender simplifies material handling and quality control, and increases productivity.

Fast, homogeneous blending

The Blendcon Homogenizing Blender uses compressed air (or inert gas) to lift, turn and tumble dry materials, utilizing the high kinetic energy released when compressed air is allowed to expand

rapidly to atmospheric pressure. Compressed air is pulsed into the material in an upward circular pattern. This blending method is so effective that very few pulses are required to complete the blending cycle.

There are no mixer arms or blades to wear out or clog, making the Blendcon air blender ideal for blending abrasive or fragile materials which would shorten the life of a conventional blender or degrade fragile materials.

Better cleanout between batches

The smooth interior blend vessel surfaces help prevent buildup. There are no mixing blades, tubes, or pipes to trap material, making it easier to perform any required cleanout between different batches.

Variable blending control

The blending action and intensity are controlled by the duration and frequency of air pulses, and by the pressure and volume of air. These variables are fully adjustable to achieve optimum results for your specific application.

Features

- Fast, gentle homogeneous blending
- Easier blend vessel cleanout
- Variable blending control
- Blends abrasive or fragile materials
- Low energy consumption
- Blend process gas can be compressed air or inert gas (N₂)
- Low shear

Temperature

Minimum: -20° Fahrenheit (-29° Celsius)
Maximum: 150° Fahrenheit (66° Celsius)

Pressure

Maximum: 125 PSIG (8.62 barg)

Options

- 304/316 stainless steel construction
- Continuous blending

Homogenizing blending - how it works

When batch blending with the Blendcon blender, the following components are required:

- A Blendcon blending head which includes air-operated injector valves, injector nozzles, head sensing device, air operated cone valve and necessary air controls
- A blending vessel
- A 100 PSIG compressed air supply or inert gas
- A bin vent filter to separate the material being blended from the exhausted compressed air or inert gas
- A PLC control system for automatic sequencing of all functions of the blending and discharging cycles
- A compressed air surge tank to accumulate compressed air used for blending

The blender operates as follows:

Fill cycle

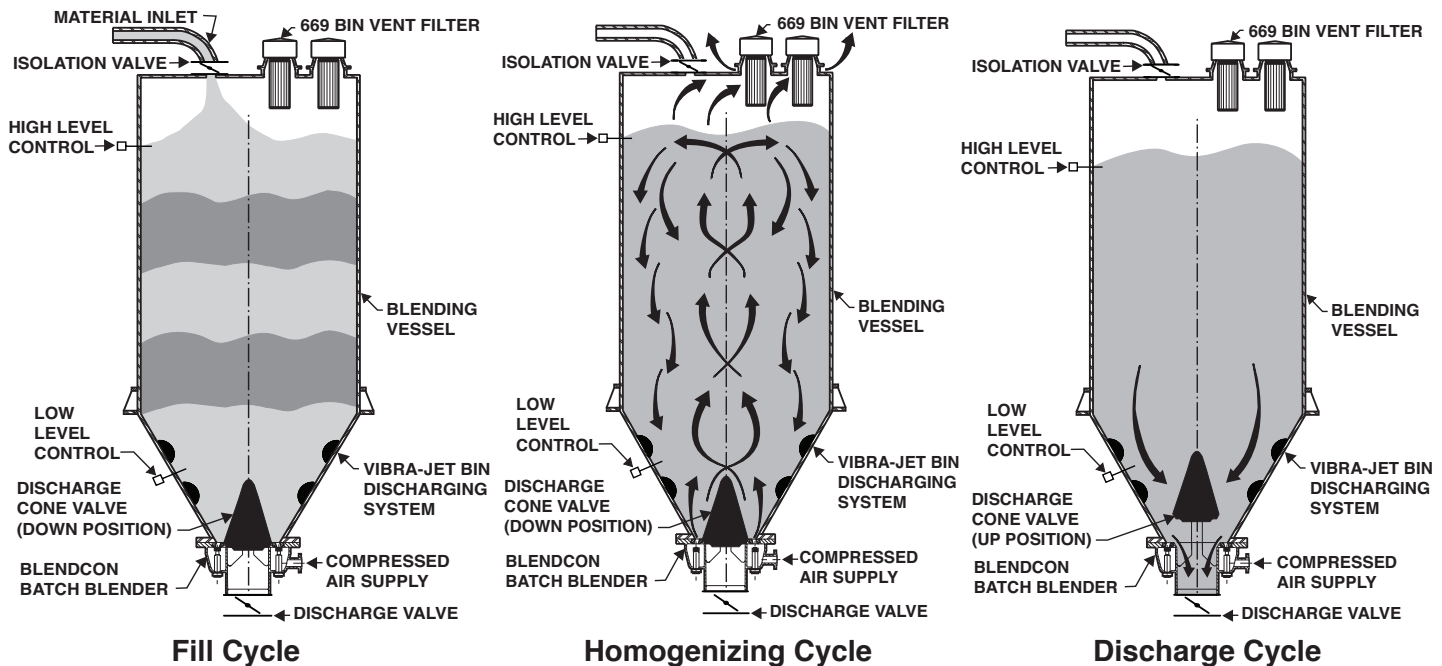
1. The fill cycle begins when the cone valve is in the down, or closed, position and, the blending vessel is completely empty.
2. Material enters and fills the blend vessel by a pneumatic conveying system or other means, and the blend vessel fills to a predetermined batch level.

Blend cycle

3. The blend cycle begins when a level control or load cell indicates the blending vessel is filled to its proper level.
4. Compressed air or inert gas is injected in pulses through injector nozzles upward, and in a circular pattern. The pulses of compressed gas normally range from a short "on" time or less to a longer "off" time". This blending action lifts the center core of bulk solids upward, and, at the same time, moves the perimeter bulk solids downward, turning and tumbling the material to a homogeneous blend.
5. During the blend cycle the exhausted compressed gas normally exits the blending vessel by means of a continuous cleaning bin vent filter, which contains and recycles the collected fine particles back into the batch being blended.

Discharge cycle

6. After blending is complete, the cone valve moves to the up, or open, position, allowing the homogeneously blended batch of material to discharge by gravity. The discharge cone also helps to prevent material from segregating during discharging.
7. The cone valve remains in the up, or open, position until the blend vessel is completely empty.



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