



JetMixer[®] Powder Mixer

FAST POWDER MIXING,
COMPLETE PROTECTION
OF POWDER PROPERTIES





TECHNOLOGY-DRIVEN ADVANTAGES

The efficient mixing of powders into liquids is a crucial step in profitable pharmaceutical and biopharmaceutical manufacturing. For operations where low shear and high product integrity are required, no other technology performs as well as the patented venturi system used by the ILC Dover JetMixer system.

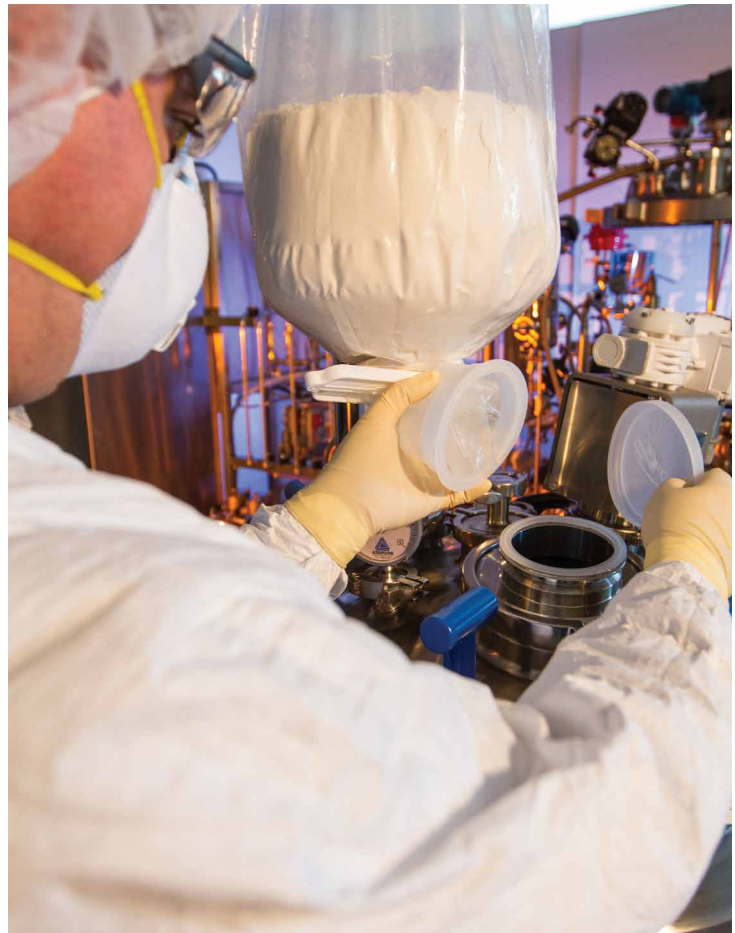
The JetMixer system offers an array of advantages over competitors' systems, like the Tri-blender, including:

- Virtually no shear forces exerted on the powder and insignificant product heating, so the powder's properties are preserved
- Particle-by-particle introduction of powder via strong vacuum helps prevent bridging and improves mixing
- Efficient powder delivery at viscosities from 1 cP to 10,000 cP
- Rapid mixing
- Complete dissolution of powder, without clumping
- Very low energy consumption
- Small footprint and mobile design that allows for use of one system for several processes
- Couplings that interface easily with flexible or rigid isolators, FIBC discharge stations and more
- Improved ergonomics for better worker safety (operates at floor level, below mezzanine-mounted tanks)
- Geometry that ensures effective WIP/CIP (wash-in-place/clean-in-place) operations
- Design that easily handles viscous solutions



PATENTED VENTURI NOZZLE SYSTEM MAKES THE DIFFERENCE

The patented JetMixer nozzle system creates an accelerated jet that draws a surprising amount of powder into the liquid stream, without introducing clumping, shearing or heating. The hopper system and constant level of venturi-generated vacuum ensure particle-by-particle induction and mixing, even with high-viscosity fluids. The system works equally well for mixing solid suspensions into liquids or for liquid-liquid mixing. In all cases, the components are uniformly mixed to form a homogeneous fluid.





SIMPLE SYSTEM COMPONENTS KEEP MAINTENANCE AND OPERATING COSTS LOW

The JetMixer system consists of a few cleverly designed, elegantly simple components. A pump provides the driving force needed for operation. With only one moving part, the pump is long-lasting, easy to clean and simple to maintain. Energy consumption is also low, which helps reduce operating costs.

The venturi system and mixing chamber contain no moving parts, and feature smooth, polished flow channels and a lack of crevices, edges or other impediments to WIP/CIP operations. Its inherently smooth geometry makes the system particularly suited for pharmaceutical and biopharmaceutical processes where CIP is a must and cross-contamination can imperil large amounts of high-value product.

The JetMixer system can handle operating viscosities ranging from 1 cP to 10,000 cP. At the same time, the all-stainless-steel system is robust, capable of operating at very low vacuum and high process temperatures.

Moreover, since splashing and vapor production are not an issue with the JetMixer system, concerns over powder bridging above the powder feed valve are eliminated.

VERSATILE SYSTEM DESIGN ACCOMMODATES A WIDE VARIETY OF APPLICATIONS

In addition to the standard compact, mobile and fixed skid-mounted forms, the JetMixer system can be easily configured to conform to dust-free or highly contained process environments. It can also be supplied with components fully compatible with nitrogen blanketing and other inert-gas protection protocols, as well as jacketing suitable for heating or cooling, depending on process requirements.





AUXILIARY EQUIPMENT AVAILABLE FOR TOUGH APPLICATIONS

For powders that tend to clump or aggregate, we offer rotating comb systems for fluidization, or our JetBreaker™ delumping system. And for particles in suspension, we can provide homogenizers that can be calibrated to produce specific final particle sizes.



TALK WITH OUR EXPERTS

At ILC Dover, we look forward to collaborating with you to develop systems tailored to your exact needs. To speak with one of our experts, visit www.ilcdover.com or call +1.302.335.3911 or toll-free +1.800.631.9567 (US & CAN).



BEYOND BOUNDARIES®

ILC Dover is a world leader in the innovative design and production of engineered flexible protective solutions, for pharmaceutical and biopharmaceutical, personal protection, bulk packaging, and aerospace industries. Our customers will attest to our relentless dedication to high-value products, advanced technology, and responsive service, as our visionary solutions have improved efficiency while safeguarding people, product, and infrastructure in hazardous conditions through flexible protective solutions since 1947.



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