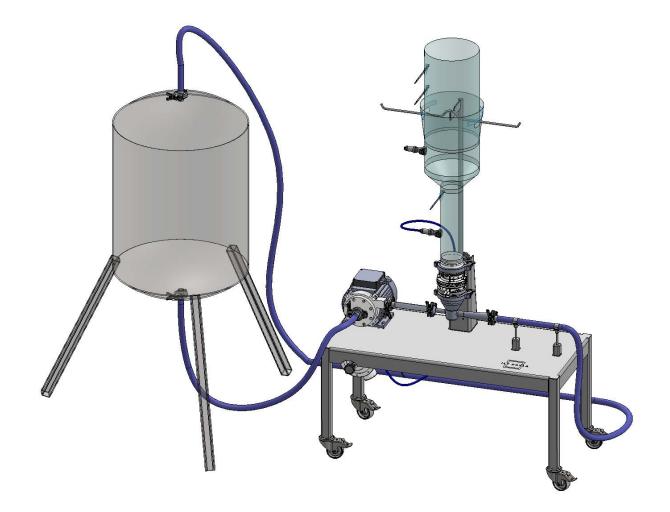


Containment From Concept to Cure

EZ JetFlow[™]

The Single-Use JetMixer[™] System



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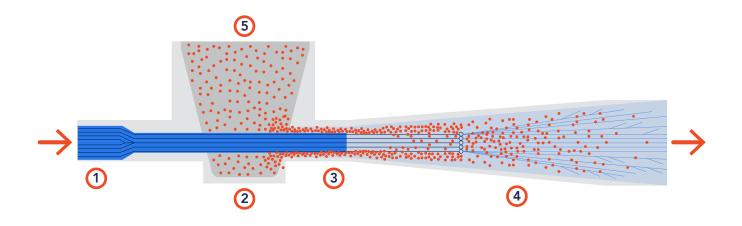
EZ JetFlow[™]

ILC Dover builds powder and liquid mixing systems based on an innovative principle. This system, called JetMixer[™], is based on the venturi effect, enabling homogeneous powder-liquid mixing. It's used in a wide range of biopharmaceutical, food, and chemical industries. EZ JetFlow[™] is ILC Dover's single-use JetMixer[™] system, which enables homogeneous, lump-free mixing of a wide range of products, from salt to thickeners.

Injection System Description

Below is a schematic illustration of the EZ JetFlow[™], which is composed of five different zones:

- 1. Inlet Pipe with Convergent Nozzle: Accelerates the liquid to create a powerful, straight jet.
- 2. Injection Chamber: Conical chamber that directs the powder towards the jet.
- 3. Absorption Tube: Space around the jet where the powder is sucked into the jet.
- 4. Diffuser: Zone where the jet expands, creating high turbulence for uniform powder-liquid mixing.
- 5. Gravitational Powder Feed: Mechanism for feeding powder into the system by gravity.





EZ JetFlow[™] Details

EZ JetFlow[™] is part of a complete disposable skid. This skid is represented on a drawing and a PID diagram on the next pages with a description of the main parts, general dimensions, technical data, and details regarding materials, certificates, and surface finish.

Material

- Single-use Injector: Marlex 9018 High-Density Polyethylene (HDPE)
- Metallic Frame: AISI 304
- Seals: PTFE
- Hoses: Silicone; Polysulfone End Connection Tri-Clamp
- Avax Valve: Body: PC + ABS / Seal: TPE
- EZ BioPac[®]: ArmorFlex 114
- Pump Motor: ETFE-Coated Aluminum
- Single-Use Pump Head: Polypropylene

Certificates Supplied with Each EZ JetFlow™

- FDA
- USP class VI
- BSE / TSE
- ATEX 3GD for the Pump & Pressure Reducer
- IECEx for the Pump: IEC 60079-0 (2017), IEC 60079-7 (2017), IEC 60079-31 (2022), ISO 80079-36 (2016), ISO 80079-37 (2016)
- 3.1 Certificate

ATEX Execution

• ATEX 3GD

Surface Finish

- Product Contact Part: Ra ≤ 0.8 μm
- Non-Product Contact Part: Ra \leq 1.6 μ m

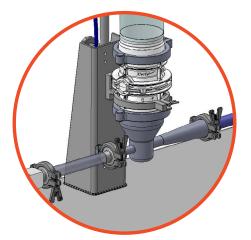
Technical Data

- Approx Liquid Flow Rate: 5.00 m³/h
- Approx Powder Flow Rate*: 0.40 m³/h to 0.75 m³/h
- Pump Motor (IP67) Operating at Ambient Temperature: 0 to 40°C
 - Single-Phase 200-240 VAC 50/60 Hz
 - Three-Phase 200-240 VAC 50/60 Hz

*These values are only indicative (NaCl and Lactose) and must be adjusted according to the powder used. Injection trials can be carried out at our factory to define these parameters.

EZ JetFlow[™] Options

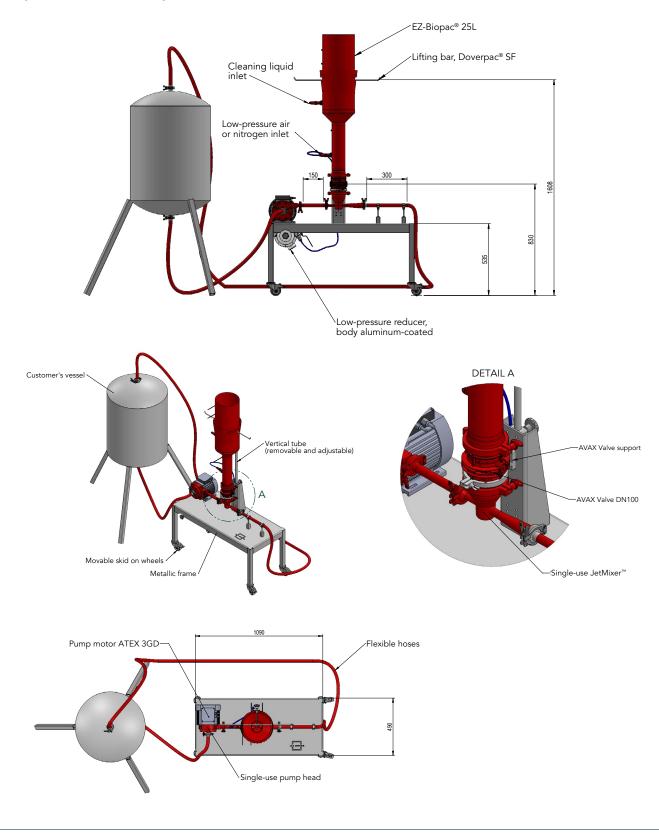
- Two single-use pressure indicators at the inlet and outlet to monitor and set the correct pump speed
- Portable lifting column to facilitate the installation of the EZ BioPac[®] on the JetMixer[™]
- Metallic frame made of AISI 316L
- Other custom requirements can be discussed directly with ILC Dover





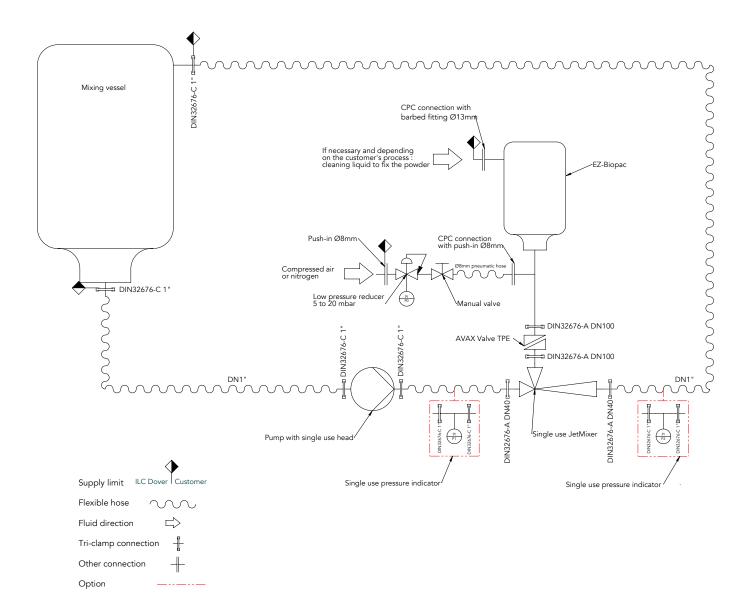
EZ JetFlow[™] Drawing

*All parts in red are disposable





EZ JetFlow[™] PID Diagram







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Containment From Concept to Cure

For more than seven decades, ILC Dover has led the industry in single-use powder and liquid handling, solving life sciences' most complex bioprocessing challenges. Our illustrious heritage is showcased through pioneering breakthroughs such as EZ BioPac[®], a first-of-its-kind in powder handling; DoverPac[®], the epitome of excellence in HPAPI containment; and ArmorFlex® films, renowned for superior resistance and anti-static properties. We uphold our mission to deliver custom containment solutions so you can uphold your mission to deliver life-saving therapies.

