

CUHBE™ FT-5 | Automated In-Line Degassing & Homogenization

for Adhesives, Resins, Sealants, Foam Precursors, Composites & More



Turnkey continuous-flow system for preparing bubble-free, O₂-reduced, uniform process fluids.



SYSTEM FUNCTION

Degassing: ultrasound releases entrained bubbles and dissolved gases from the process fluid; vacuum extracts the liberated gases from the headspace.

Homogenization: ultrasonic cavitation promotes deagglomeration and uniform distribution of fillers, pigments, particles, tougheners, and additives.

In-line operation: user sets the single-pass throughput; internal recirculation provides repeated ultrasonic exposure.

WHY IT MATTERS

- Reduces the risk of defects from air bubbles and dissolved oxygen in process fluids before dispensing, coating, casting, or curing.
- Supports stronger bonds, smoother coatings, more consistent filling and casting, and more reliable cured parts.
- Improves uniformity in filled, pigmented, reinforced, or functionalized systems.
- Combines degassing and homogenization in one automated flow-through processing step.

Continuous Ultrasonic Homogenizer & Bubble Eliminator (CUHBE™) combines in-line ultrasonic degassing and homogenization in a single automated process to eliminate voids, reduce dissolved O₂, improve uniformity, and prepare process fluids for dispensing, coating, casting, or curing.

OPERATING PRINCIPLE

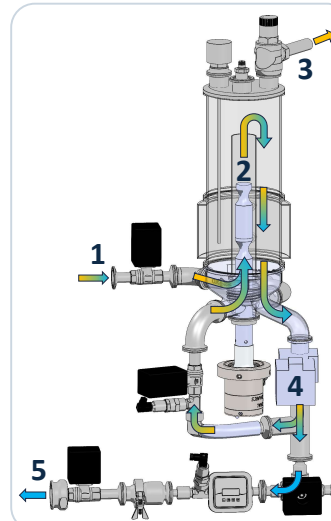
1. Process Fluid Inlet — Vacuum draws feed fluid through the inlet at the user-defined throughput.

2. Ultrasonic Exposure Zone — High-amplitude ultrasound releases gases and homogenizes the fluid.

3. Vacuum Gas Removal — Liberated gases separate from the fluid and are extracted under vacuum.

4. Internal Recirculation — Internal pump recirculates the fluid to create multiple ultrasonic exposures.

5. Process Fluid Outlet — Internal pump discharges treated fluid through the outlet at the user-defined throughput.



FT-5 PILOT SPECS

Single-pass throughput	User-defined up to 5 L/min
Internal recirculation rate	Factory-set to 20 L/min
Ultrasonic power	Auto-adjusted up to 1200 W
Ultrasonic amplitude	User-defined up to 110 microns
Ultrasonic frequency	Auto-adjusted: to 20 kHz ± 1 kHz
Vacuum level	Auto-adjusted down to 10 kPa
Inlet/outlet connections	1.5 in. Tri-Clamp
Optional water chiller	1400 W cooling capacity

EXAMPLE APPLICATIONS

- Structural adhesives and two-part epoxy components
- Resins, sealants, coatings, potting, and casting liquids
- Filled, pigmented, reinforced, or additive-containing systems
- Composite resins and reinforcement-related liquids
- Foam precursors and controlled-aeration systems
- Oils, plasticizers, diluents, fuels, and lubricants
- Molten waxes, hot melts, and thermoplastic liquids
- Nanoparticle- or microsphere-containing formulations
- Beverages, botanical extracts, and oxygen-sensitive food liquids
- Polyols, glycols, and other liquids requiring dehydration