



Better Products for Better Yield

NEXT GENERATIONS THERAPY MANUFACTURING

PROVEN PROCESS EQUIPMENT FOR GENE THERAPY AND GENETIC VACCINES

Novel, targeted ways to treat diseases like gene therapy, DNA and RNA vaccines, exosomes, and stem cells imply new manufacturing challenges. Dealing with very shear sensitive particles like LNPs or viral vectors, especially in a continuous, sterile, or single-use processes, relate to new process equipment requirements.

Levitronix® process equipment is intended to handle demanding fluid applications ensuring the highest product yields.

Levitronix® PuraLev® pumps are ultra-low shear and pulsation-free by design, minimizing particle degradation or aggregation.

Levitronix® PuraLev® mixers enable effective low-shear mixing over a wide operating range. And for optimal flow control, Levitronix® LEVIFLOW® flow sensors ensure high-precision flow measurement.

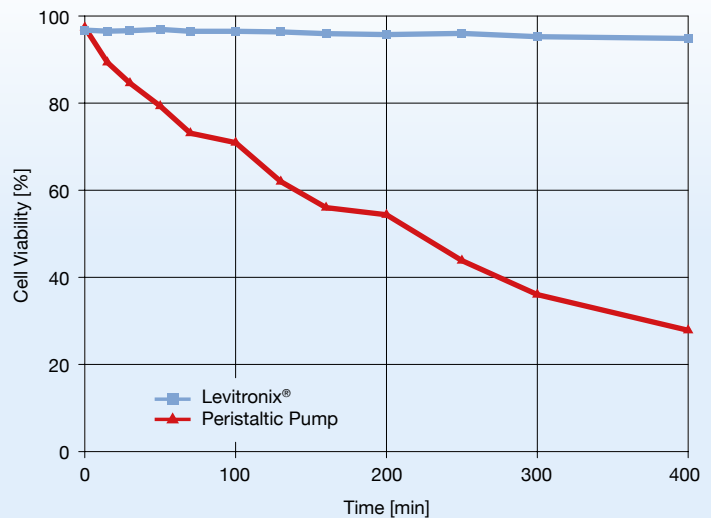
Cell Expansion // Low Shear TFF Perfusion

Levitronix® single-use pumps are the industry standard in TFF perfusion and successfully used for cell expansion to produce viral vectors.

Harvest // Gentle and Safe Clarification

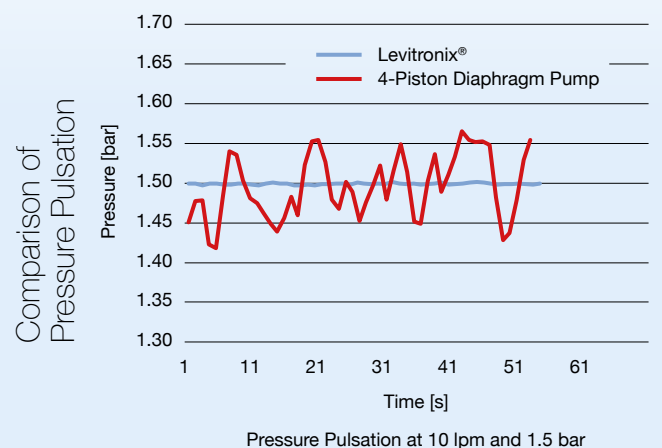
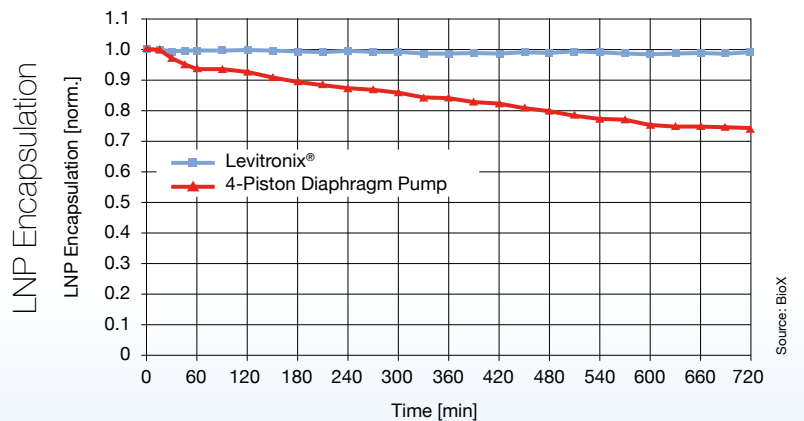
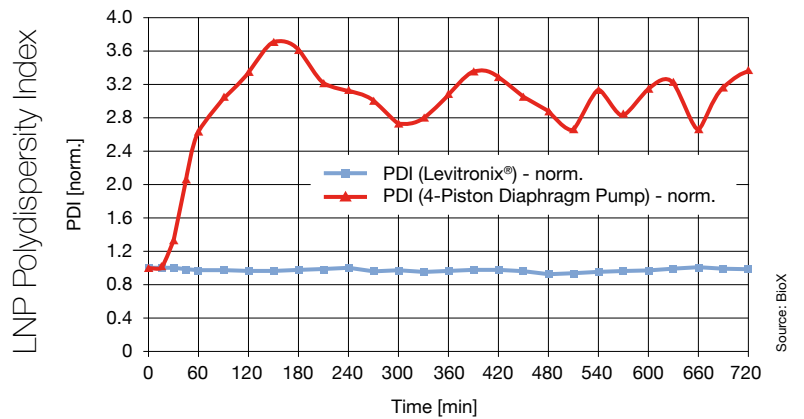
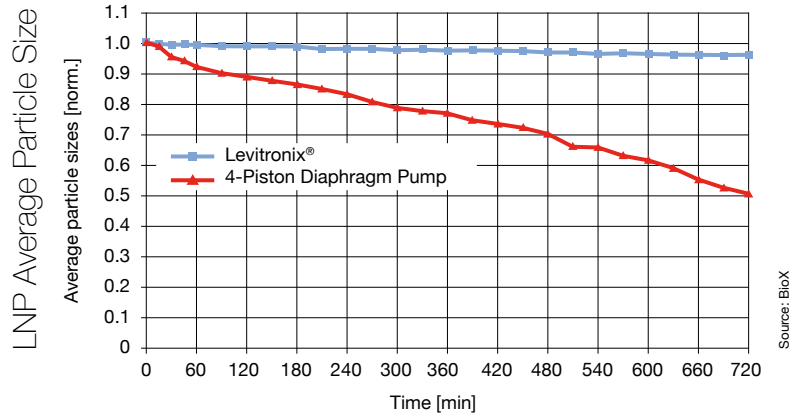
The gentle flow performance is ideal to harvest or clarify viral vectors or plasmids by tangential flow or depth filtration.

LEVITRONIX vs. PERISTALTIC PUMP Comparison of Cell Viability



Time-dependent viability of the cell suspension pumped with 3.4 L/min. without backpressure.

LEVITRONIX vs. 4-PISTON DIAPHRAGM PUMP



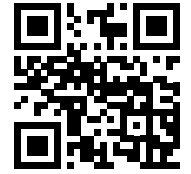
Purification // Gentle LNP Processing

The new class of RNA vaccines requiring the encapsulation into a LNP, can lead to unknown challenges during scale-up and manufacturing. Levitronix® PuraLev® pumps are proven to provide the lowest shear to LNPs in TFF purification and transfer.

Formulation // Accurate Blending

The pulsation-free pump flow in combination with the accurate flow measurement allow for accurate blending, and transfer of multiple process solutions to improve and scale these processes.

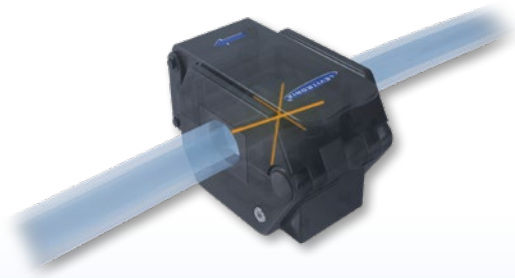
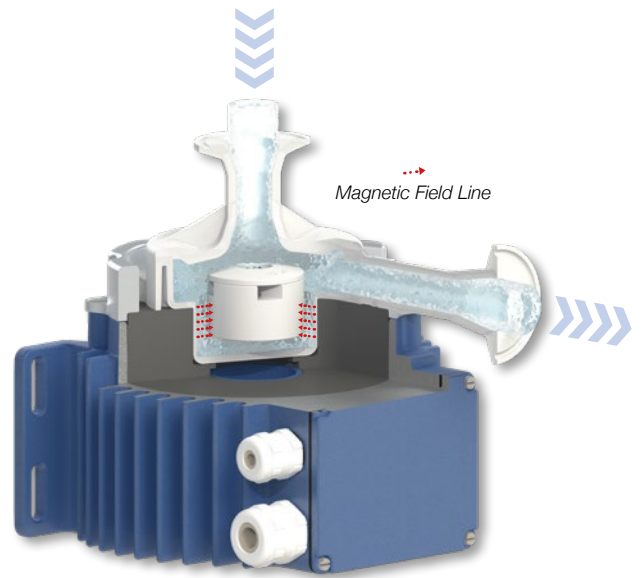
BETTER PRODUCTS FOR BETTER YIELD



For more information visit www.levitronix.com

PuraLev® Pumps // The Most Gentle Pump in Bioprocessing

PuraLev® Single-Use and Multi-Use pumps are designed low shear, pulsation-free, and continuously controlled flow that ensures the highest product yield. Based Levitronix® bearingless motor technology, the pump impeller is suspended, contact-free, inside a sealed casing and is driven by the magnetic field of the motor resulting in a gentle flow.



LEVIFLOW® Flow Sensors // Accurate and Robust Flow Measurement

LEVIFLOW® clamp-on flow sensors are designed for non-invasive high-precision flow measurement. Based on the Levitronix 6-beam technology, these sensors provide unparalleled accuracy that can be further enhanced with the Levitronix® SU flow pipe.

PuraLev® Mixers // Easy High-Efficiency Mixing

The PuraLev® mixer is designed for gentle and high-efficiency mixing of both fluids and powders. Due to the magnetic levitation principle, there is no shaft needed going through the mixer bag allowing it to be a completely self-contained system.

