LEVITRONIX®
PUMP SYSTEMS

ULTRAPURE AND SAFE PUMPS FOR BULK CHEMICAL DELIVERY

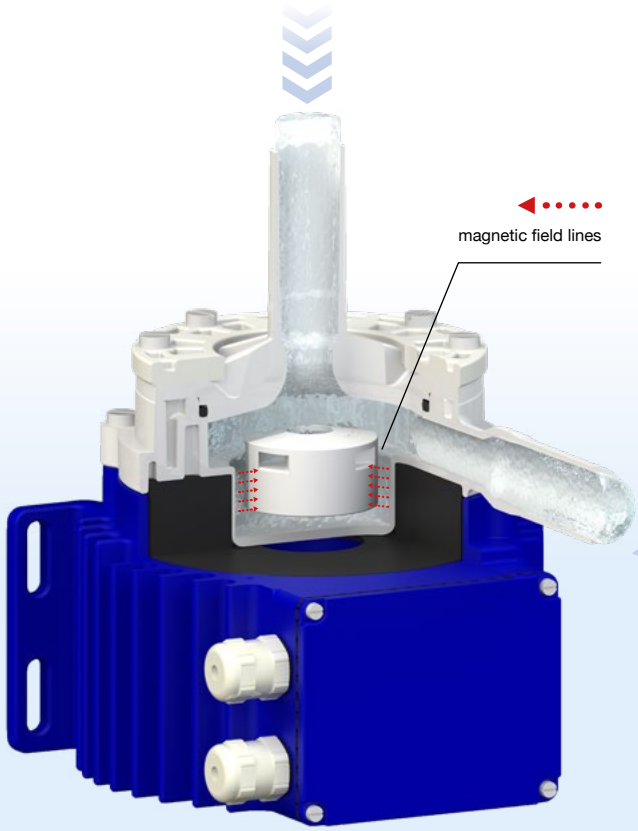
LEVITRONIX®

THE IDEAL PUMP IN CHEMICAL DELIVERY SYSTEMS

Managing process integrity starts with the liquids that come in direct contact with the wafer. With ever-increasing miniaturization, the requirements for the purity of bulk chemicals as well as their supply systems are dramatic.

Compared to pumps, pressurized vessels bear a water hammer risk that can cause particle release from filters and safety concerns. Among all pump systems for semiconductor manufacturing, Levitronix® pumps have become the industry standard for ultrapure wet applications as the absence of a mechanical bearing leads to virtually no particle generation.

Levitronix® pump systems are designed for demanding bulk chemical delivery applications where ultrapure and safe processing will ensure the highest yield.



The magnetic levitation allows high rpm resulting in continuous, large flows.

ADVANTAGES OF A LEVITRONIX® PUMP SYSTEM

The Purest Pump //
ultra low particle generation

Levitronix® pump systems are based on active magnetic levitation. There is no mechanical coupling between the impeller and the pump head casing, which leads to wear-free operation and, therefore, virtually no particle generation.

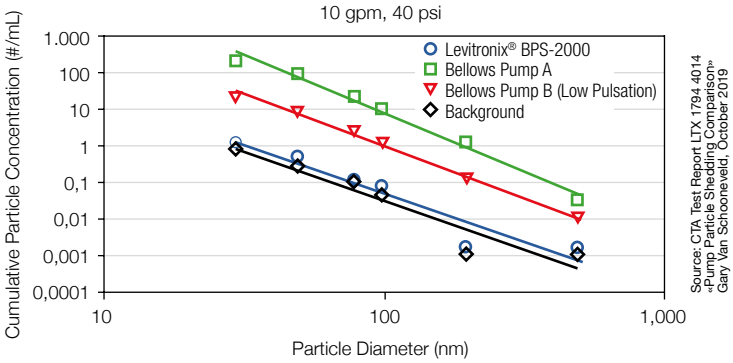
Safest Processing //
no water hammer

In comparison to pumps, pressurized vessels are installed in a dead-headed system, which bears the risk of a water hammer. A water hammer can cause particle release from filters and safety concerns due to large hydraulic shocks.Levitronix® pumps allow for installation in a recirculation loop, which improves filter performance and maximizes safety.

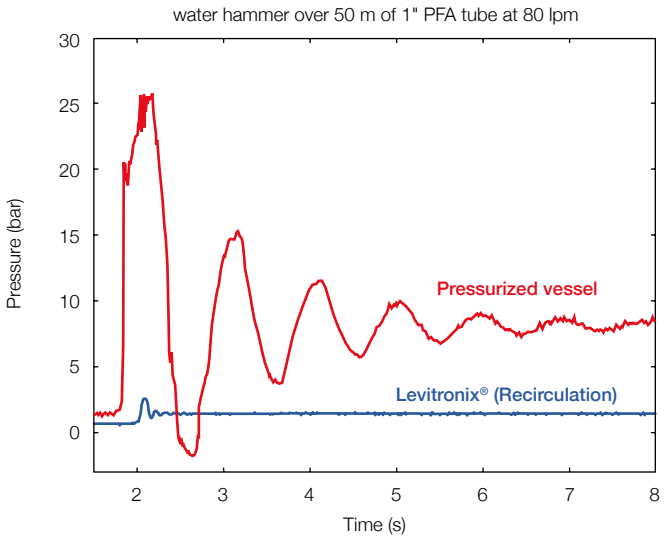
Increased Purification //
multiple filter cycles

Installation of a Levitronix® pump in a recirculation system allows for multiple cycles through the filter and, therefore, increased purification. In comparison, in single filtration steps, as in pressurized vessel systems, a large part of contamination remains in the liquid.

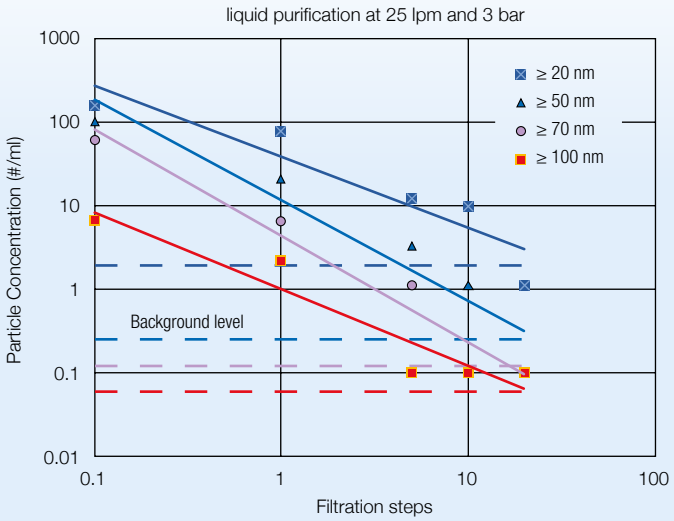
PARTICLE SHEDDING OF A LEVITRONIX® PUMP COMPARED TO TWO BELLOWS PUMPS

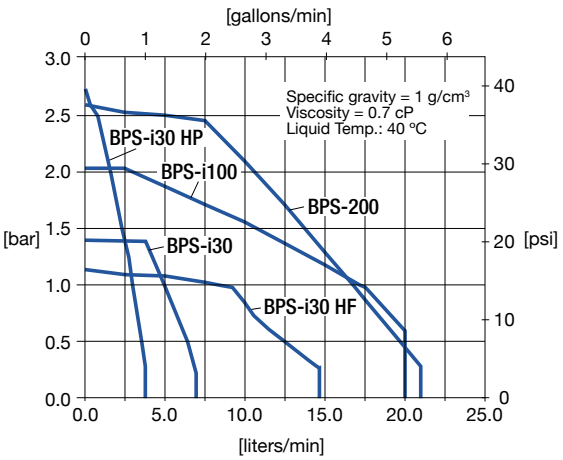


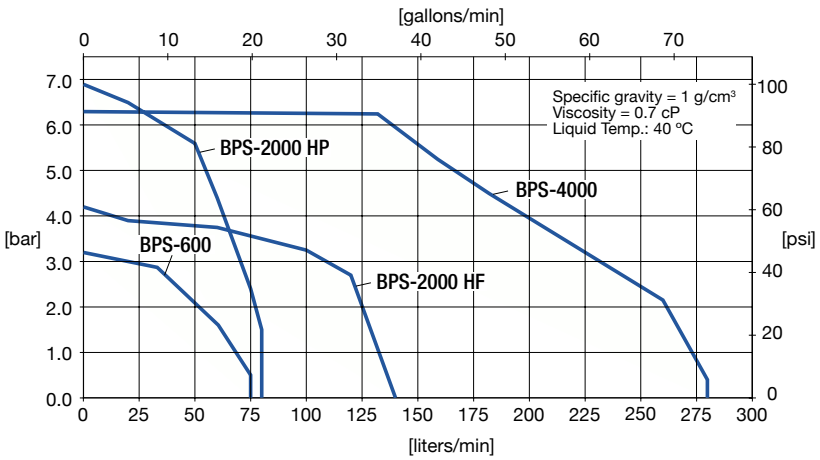
COMPARISON BETWEEN A LEVITRONIX® AND A PRESSURIZED VESSEL SETUP



PARTICLE CONCENTRATION AFTER MULTIPLE FILTRATIONS IN A LEVITRONIX® RECIRCULATION SETUP







Overview // SU Pump Systems

BPS-i30 Standard
1.5 bar (22 psi)
7.4 l/min (2 gpm)

BPS-i30 High Pressure
2.8 bar (40 psi)
3.8 l/min (1 gpm)

BPS-i30 High Flow
1.1 bar (16 psi)
14.7 l/min (3.9 gpm)

BPS-i100
2 bar (29 psi)
20 l/min (5.3 gpm)

BPS-200
2.6 bar (37.7 psi)
21 l/min (5.5 gpm)

BPS-600
3.2 bar (46 psi)
75 l/min (20 gpm)

BPS-2000 High Pressure
6.9 bar (100 psi)
80 l/min (21 gpm)

BPS-2000 High Flow
4.2 bar (61 psi)
140 l/min (37 gpm)

BPS-4000
6.3 bar (91 psi)
280 l/min (74 gpm)

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