Image courtesy of ClassOne

LEVITRONIX®
PUMP SYSTEMS

INCREASED UNIFORMITY AND YIELD IN METAL PLATING

LEVITRONIX®

MEET THE INDUSTRY STANDARD

With ever-increasing miniaturization, the semiconductor plating industry is providing advanced IC packages to develop next-generation chip designs. To keep pace with technological improvements, pump systems must keep process precious plating solutions controlled, uniform, and with no particle generation.

Compared to Levitronix® pumps, magdrive centrifugal pumps contain mechanical slide bearings, which clog and fail due to the solution's precipitation. Levitronix® pump systems are based on active magnetic levitation, which results in a significantly extended equipment uptime and a reliable, pulsation-free, and consistent flow. The absence of a mechanical bearing ensures virtually no particle generation.

Levitronix® pump systems are designed for demanding plating applications where consistent, uniform, and ultrapure processing will ensure the highest yield.

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

ADVANTAGES OF A LEVITRONIX® PUMP SYSTEM

Extendend Lifetime // no bearing failure

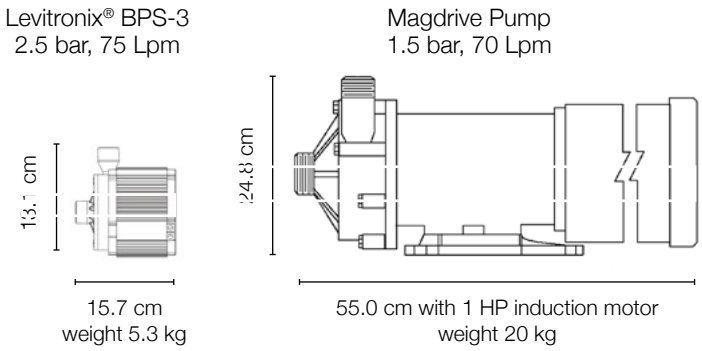
By eliminating a mechanical bearing, no mechanical friction occurs that could cause local hotspots. No narrow gaps exist where metal could precipitate. The low-shear, dead-zone-free pump design, and the smooth, wetted plastic surfaces further help avoid metal deposition in the pump, resulting in an increased lifetime.

NO CLOGGING OF BEARINGS OR PUMP

Levitronix® pump after one year of operation with gold sulfite solution

Magdrive pump after one month of operation with gold sulfite solution

COMPARISON BETWEEN A LEVITRONIX® PUMP AND A MAGDRIVE PUMP

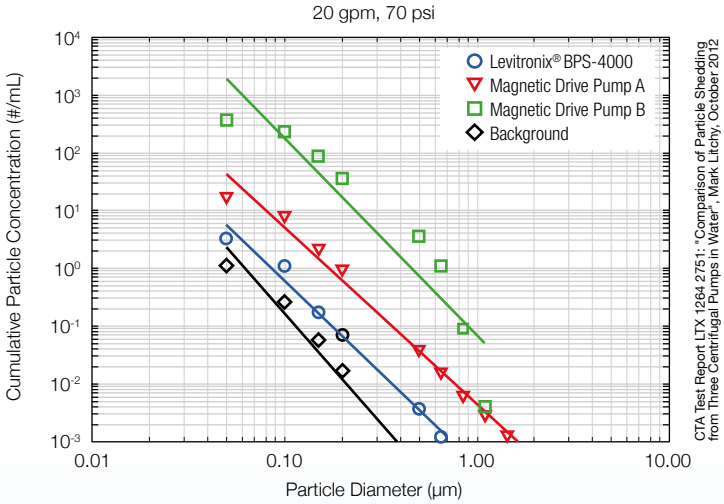


Volume Ratio = 1:10
Weight Ratio = 1:4

Smallest Footprint // substantially smaller than magdrive pumps

The pump and motor's highly integrated design combined with the absence of a mechanical bearing results in a system that greatly reduces the space requirements and allows for installation in confined spaces.

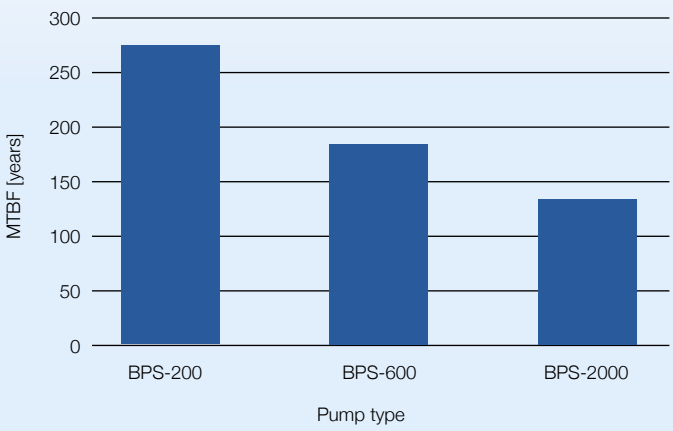
PARTICLE SHEDDING OF A LEVITRONIX® PUMP COMPARED TO TWO MAGNETIC DRIVE PUMPS



The Purest Pump // ultralow particle generation

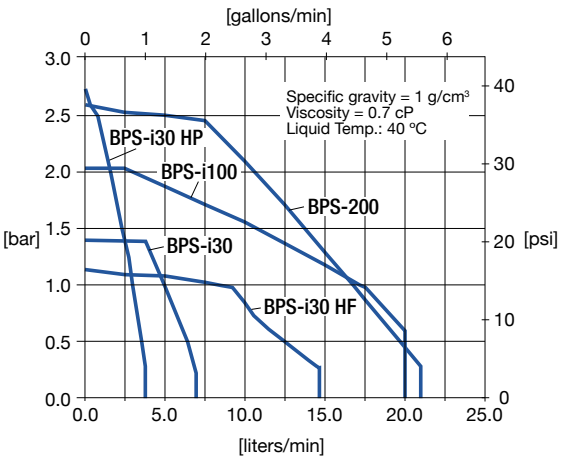
Levitronix® pump systems are based on active magnetic levitation. There is no mechanical coupling between the impeller and the pump head casing, which leads to wear-free operation and, therefore, virtually no particle generation.

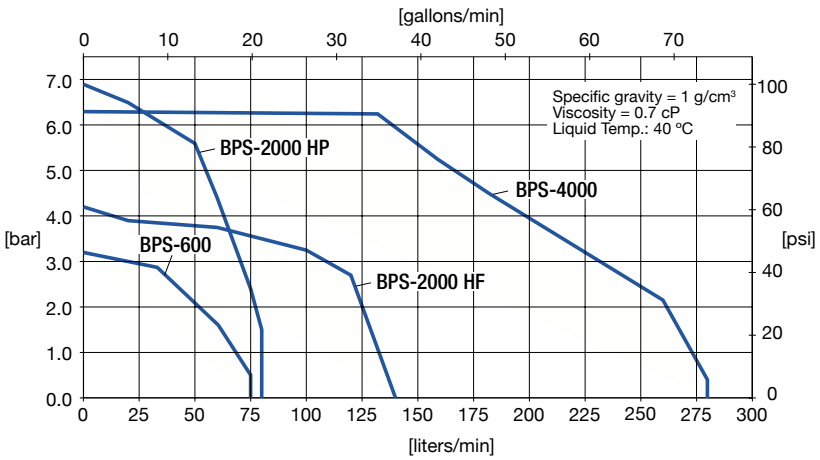
MTBF OF DIFFERENT LEVITRONIX® PUMPS



Highest Reliability // MTBF > 100 years

There are no bearings to wear out or seals to break down. As a result, equipment uptime increases massively, extending the life of the process equipment and reducing maintenance costs.





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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