



LEVITRONIX®  
PUMP SYSTEMS



**INCREASED  
UNIFORMITY  
AND YIELD  
IN METAL  
PLATING**



# 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*

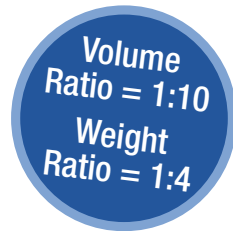
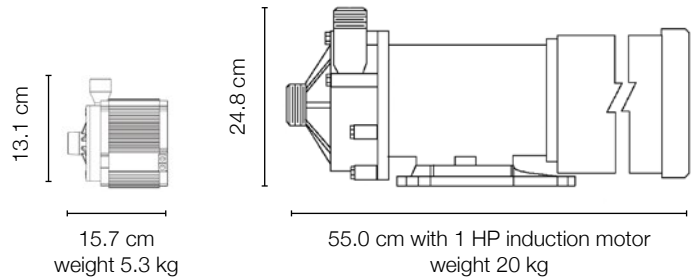


*Magdrive pump after one month of operation with gold sulfite solution*

## COMPARISON BETWEEN A LEVITRONIX® PUMP AND A MAGDRIVE PUMP

Levitronix® BPS-3

Magdrive Pump 1.5 bar, 70 Lpm



### 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.

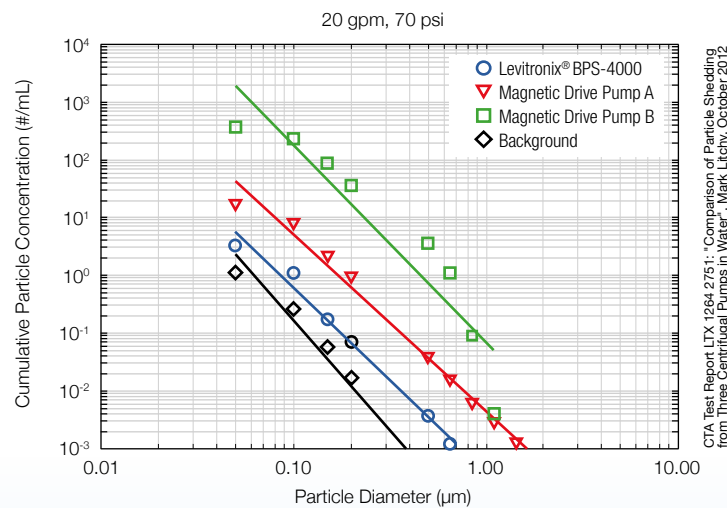
### The Purest Pump // ultralow particle generation

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.

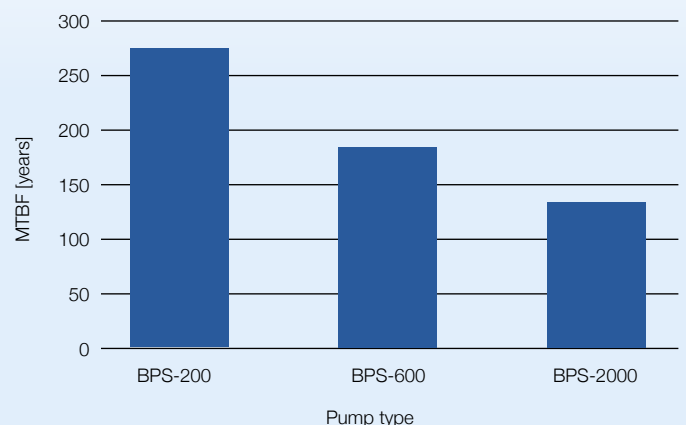
### Highest Reliability // MTBF > 100 years

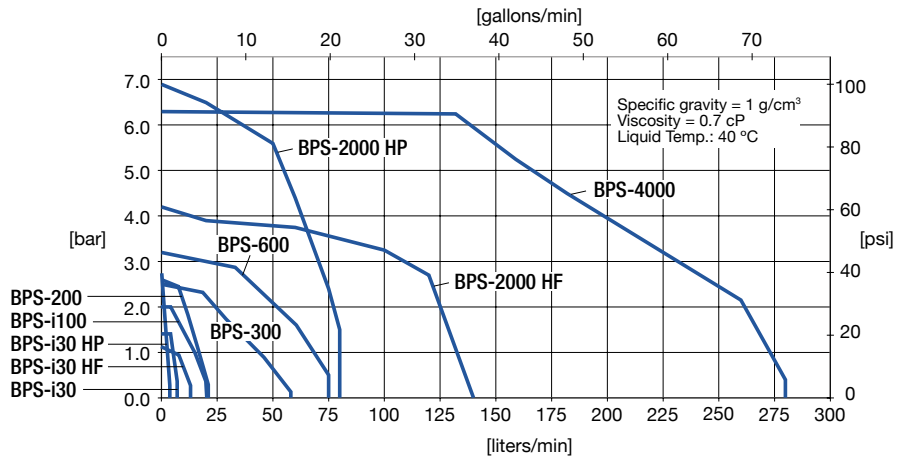
There are no bearings to wear out or seals to break down. As a result, equipment uptime increases massively, extending the life of the process equipment and reducing maintenance costs.

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



### MTBF OF DIFFERENT LEVITRONIX® PUMPS





## 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)



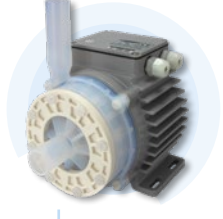
**BPS-i100**  
2 bar (29 psi)  
20 l/min (5.3 gpm)



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



**BPS-300**  
2.5 bar (36.2 psi)  
58 l/min (15.3 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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