

The SmartPump™ is a positive pressure pump with a patented high-precision computer actuated valve coupled with a patented precision nozzle. SmartPump™ technology was developed to produce flow rates that can be more precisely controlled than any other high-speed dispensing pump of its kind featuring discrete volumetric control down to 100 picoliters. By maintaining constant material pressure and running a customizable computer-controlled valve open and close routine, the SmartPump™ can generate precise starts and stops, maintain a consistent material flow rate, and handle an extreme range of material viscosities.



**SIZE:**

H 219.4 x W 19.8 x D 31.5MM  
(H 8.64 x W 0.78 x D 1.24 IN)

**WEIGHT:**

0.50 KG (1.0 LB)

**MATERIAL INLET:**

LEUR LOCK, 10-32

**AIR PRESSURE:**

0-1000 KPA (0-150 PSI)

**VALVE RESOLUTION:**

0.1 μM

**DEAD VOLUME:**

0.2315 ML

**VISCOSITY RANGE:**

0.001-1000 PA·S (1-1,000,000 CPS)

**WETTED PARTS MATERIALS:**

316/316L, VITON,  
FLUOROELASTOMER, BUNA N,  
POLYPROPYLENE, ZIRCONIA,  
ALUMINA, TITANIUM NITRIDE,  
TUNGSTEN CARBIDE.

(DEPENDING ON MATERIAL BEING  
DISPENSED AND COMPATIBILITIES)

**FEATURES:**

- TIGHT VOLUMETRIC CONTROL AS LOW AS 100 PL RESPECTIVELY
- REDUCED LINE WIDTHS (AS SMALL AS 20μM)
- BROAD MATERIAL COMPATIBILITY, INCLUDING HIGH-VISCOSITY MATERIALS
- PRECISE STARTS AND STOPS WITH NO MATERIAL TAILING
- CUSTOMIZABLE ACTUATION ROUTINES PER MATERIAL

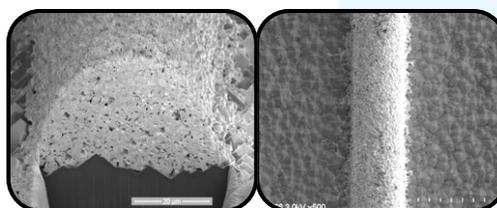
**VARIATIONS:**

- LEUR LOCK VALVE SET FOR NEEDLE DISPENSING
- HEATED SMARTPUMP™ 100

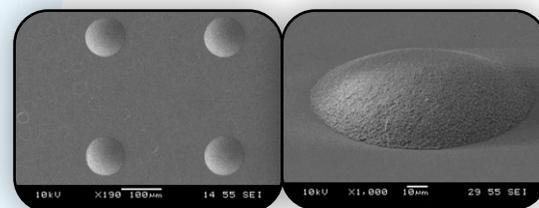
**STANDARD CERAMIC N TIP SIZE CHART**

(Contact us for larger or custom sizes)

N TIP PART#	I.D. (μM)	O.D. (μM)
900-4000-014	10	25
900-4000-015	15	25
900-4000-002	25	50
900-4000-003	50	75
900-4000-004	50	100
900-4000-005	75	125
900-4000-006	100	150
900-4000-007	125	175



50 μm wide conductive lines with high aspect ratio



100 μm diameter adhesive dot