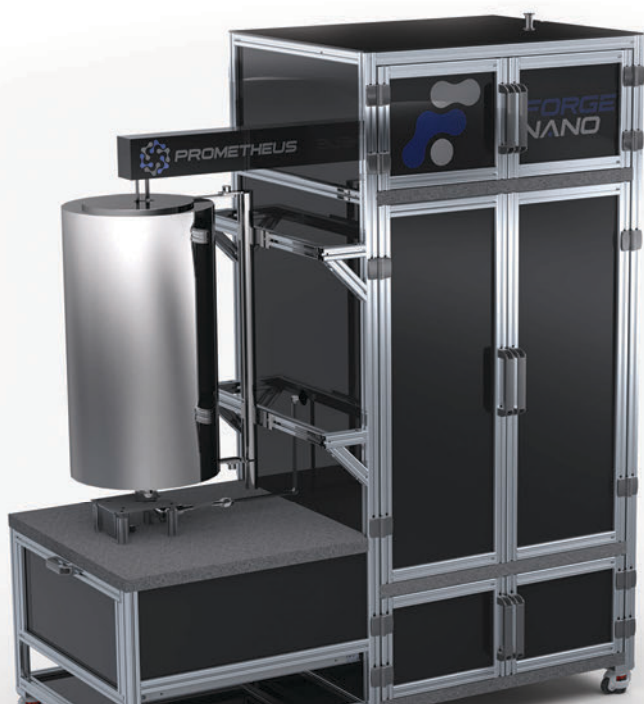




# PROMETHEUS

## ATOMIC LAYER DEPOSITION TOOL OVERVIEW

PROMETHEUS is the latest iteration of Forge Nano's cutting-edge powder ALD research tools. Our engineers have spent the last 10 years designing, optimizing, and improving this system to make it the best powder ALD research tool on the market. The PROMETHEUS series is the best choice for any researcher looking for a reliable powder ALD tool that enables truly scalable commercial applications.



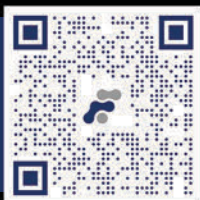
“We realized the **power** of **PROMETHEUS** **immediately** in our research. Using **PROMETHEUS** makes ALD research **easy, intuitive** and **reliable.**”

Forge Nano is delivering PROMETHEUS around the world to enable a new generation of advanced materials. With a virtual white-space environment for intellectual property development, the pressure is on to discover the next materials science breakthrough, and Prometheus is the tool to make it happen.

### DESIGNED FOR

- **POWDERS**  
Every single grain of powder is coated uniformly.
- **EASE OF USE**  
Recipe-based control system enables experiments at the click of a button
- **VERSATILITY**  
Process a wide range of micro and nano powders from grams to kilograms
- **CUSTOMIZATION**  
Multiple dosing channels, 3 reactor sizes, and additional optional features.

GLOBAL HEADQUARTERS  
1172 W. CENTURY DR.  
LOUISVILLE, CO 80027  
+1.720.531.8996  
WWW.FORGENANO.COM



**FORGE NANO**  
Pioneering scalable nano coating technologies



# PROMETHEUS

## TECHNICAL SPECIFICATIONS

Forge Nano's PROMETHEUS tool is world's most reliable, flexible, and economical Particle Atomic Layer Deposition (ALD) R&D system. PROMETHEUS tools facilitate groundbreaking R&D and new product development, while enabling IP generation.

Key Specs	PROMETHEUS models	P-2L	P-2	P-4	P-6	P-8
Vapor Draw Sources	Basic Precursor Delivery	2	2	2	4	4
	Low Vapor Pressure Precursor Delivery	-	-	2	2	4
Reactor Style	Vibrating Fluidized Bed Reactor	Standard				
Reactor Construction	Stainless Steel Body w/metal seals					
Reactor Temperature Range	Up to 450 °C					
Maximum Process Line Temperatures	Up to 200 °C					
Abatement Module	Foreline Traps, Filtration Unit					
MMI	Computer included with custom software					
Options: √ - Included o - available upgrade	Heat Jacketing *Basic insulation on P-2L	*	√	√	√	√
	Rotary Vane Vacuum Pump	-	√	√	√	√
	Mass Spectrometer	-	√	√	√	√
	Fluidization Aids (Jet Assist)	-	o	o	o	√
	Reactor Design for Inert Handling in Glovebox *not for use on late reactor (glovebox not included)	-	o	o	o	√
	Ozone Generator	-	-	-	-	√
*Mass spectrometer and rotary vane vacuum pump removable upon request						
Available reactor sizes (usable powder volume range): Small (0.5mL) Medium (12-150mL) Large (100-600mL)						

All Prometheus Tools include: Heated manifold for consistent precursor vaporization, multiple fluidization aids for uniform coating, prescribed operating boundaries, emergency stop logic, customized recipes for rapid innovation, multiple precursor zones for independent heating of solid and low-vapor pressure precursor, isolation valves for air-free handling of sensitive powders and coatings.

Forge Nano is a global leader in atomic layer deposition for advanced materials. Our suite of patented, high-throughput ALD processes and tools take ALD from lab-scale research, all the way through commercial-scale manufacturing. We design, build, and implement ALD systems of any scale, enabling the next generation of product technology. Our customers & partners include: Volkswagen, LG Corporation, Mitsui Kinzoku, University of Maryland, Oakridge National Laboratory and Argonne National Laboratory among others. Visit our website to learn more about Forge Nano, and ALD technology. [www.ForgeNano.com](http://www.ForgeNano.com)

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