

ATO

BY 3DLAB



ATO PURE

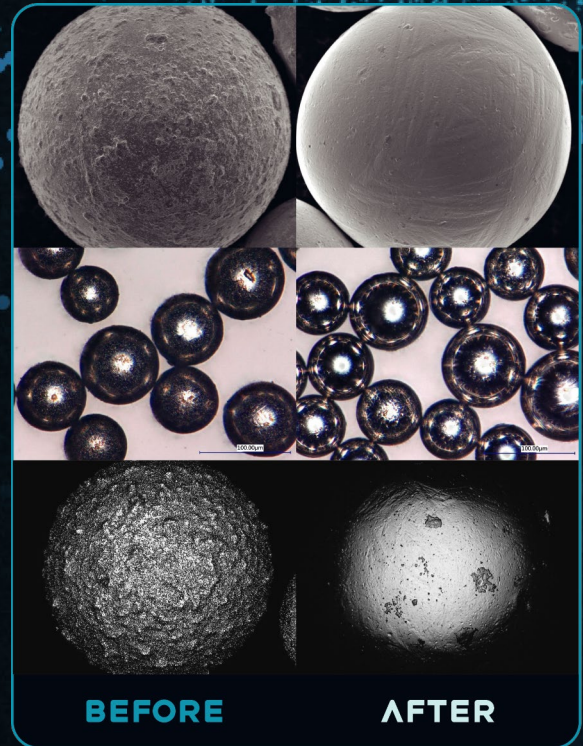
ULTRASONIC METAL POWDER CLEANING & DRYING SYSTEM

Because powder condition is process condition

ATO PURE

ATO PURE is an advanced ultrasonic system for cleaning and drying metal powders from additive manufacturing and atomization processes. It removes ultra-fine particles ($\downarrow 5 \mu\text{m}$) and surface contaminants that affect flowability and print quality, while integrated drying eliminates moisture to prevent oxidation and porosity. Automated cycles, precise sonication control, and compatibility with various fluids make ATO PURE a scalable solution for labs and production, ensuring consistent powder quality and maximum material recovery.

Metal powders accumulate ultra fine fractions and surface films during atomization and in daily AM operations. Left unmanaged, these fines ($\downarrow 5 \mu\text{m}$) and residual contaminants undermine lower powder bed density, unstable melt pools, more porosity, and reduced mechanical properties. Moisture in metal powders acts like a silent saboteur: it accelerates surface oxidation, promotes particle agglomeration, and degrades flowability.



ATO Pure eliminates the problem at its source.
Clean and dry powder = stable process = predictable results

ATO Pure uses controlled sonication to detach surface impurities and dislodge ultra fine particles from the bulk. A built in separation module removes the extracted fines, while the cleaned powder is gently conditioned and dried - ready for reuse. The process preserves particle sphericity and underlying material integrity.

ATO Pure turns powder maintenance into a controlled, highyield process so you spend less time troubleshooting and more time producing.

DRYING METAL

- Consistent layer spreading = higher, repeatable bed density
- Stable melt pools = fewer gas-related defects
- Better mechanical properties (UTS/YS/hardness)
- Lower scrap and downtime

KEY FEATURES

- High Efficiency Ultrasonic Cleaning for metal powders
- Integrated Fine Fraction Separation for enhanced purity
- Automated Cleaning & Drying Cycles with parameter's control
- Minimizes material loss and cross-contamination risks
- Broad Fluid Compatibility
- Preserves Particle Integrity
- Lab-to-Production Scalability
- Material Recovery & Cost Reduction

**STOP PRINTING WITH TIRED POWDER.
LESS FINES. LESS MOISTURE. MORE YIELD.**



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**CLEAN, DRY, AND RECOVER
METAL POWDERS YOURSELF**

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