

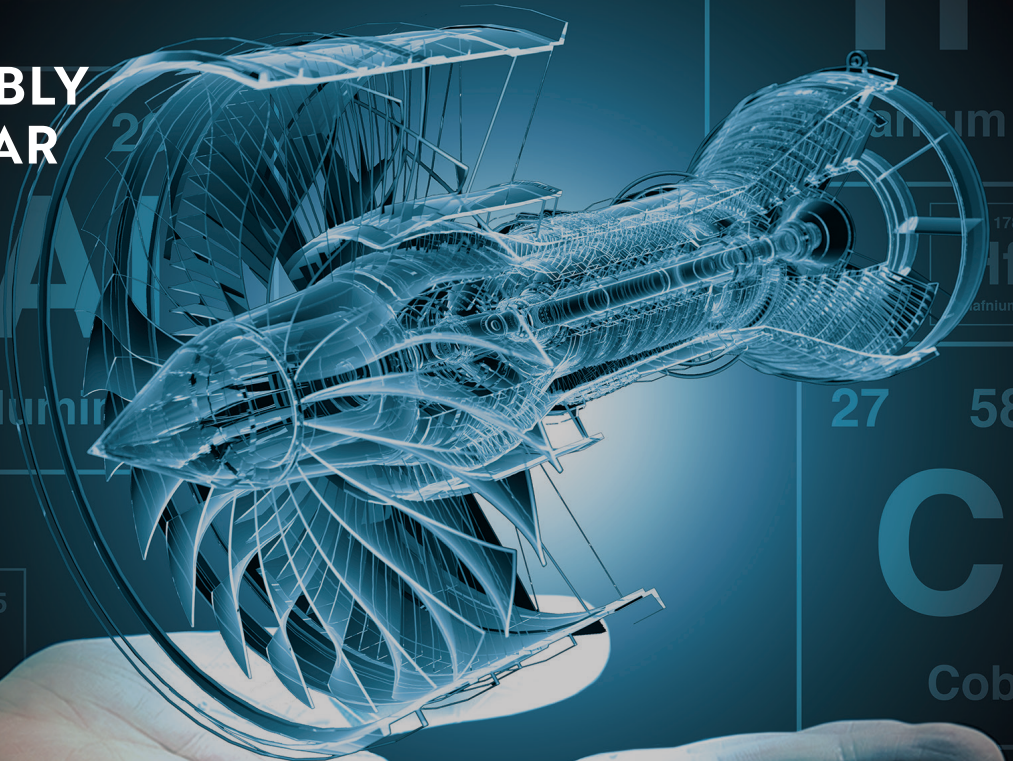
# BUILD BOLDLY

WITH 6K POWDERS

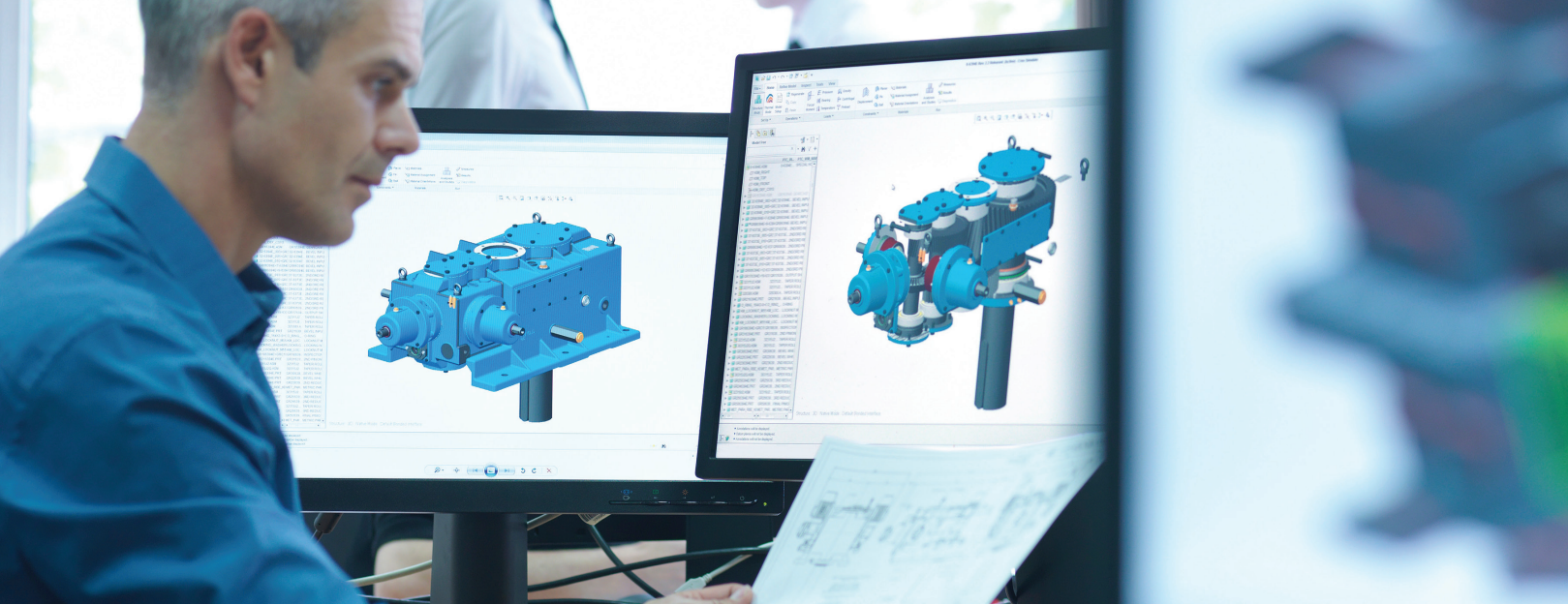
**BUILD WITH INFINITE  
OPTIONS**

**BUILD THE HIGHEST  
PERFORMANCE PARTS**

**BUILD SUSTAINABLY  
FOR THE CIRCULAR  
ECONOMY**



**6K** ADDITIVE

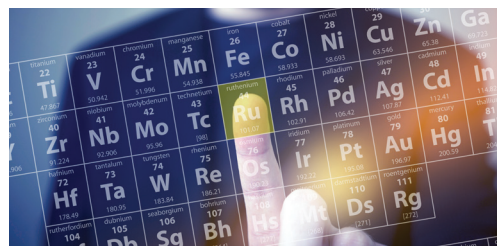


# IF YOU CAN THINK IT, WE CAN MAKE IT



## DESIGN OPTIMALLY FOR ANY PLATFORM

At 6K, 100% of powder PSD in a production run can be tailored to any Additive Manufactures (AM) platform including powder bed, EBM, and Binder Jet, direct energy deposition and cold spray, plus PM processes like MIM and HIP.



## DESIGN WITH AN UNPRECEDENTED RANGE OF MATERIALS

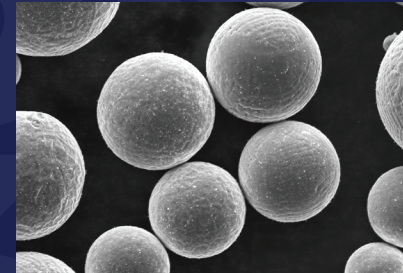
Any metal or alloy that is machined can now become a feedstock for 6K's premium powders. Design a new alloy that cannot be realized through conventional melt approaches.



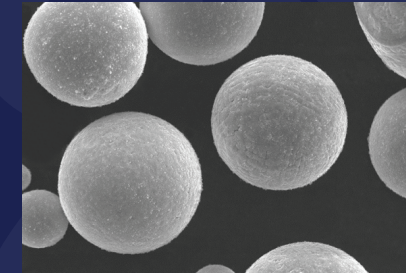
## IMPROVE PROJECT ROI, ADOPT NEW BUSINESS MODELS

Rejuvenate used powders. Control & optimize your supply chain, by transforming "waste" from your subtractive manufacturing processes into powder for AM.

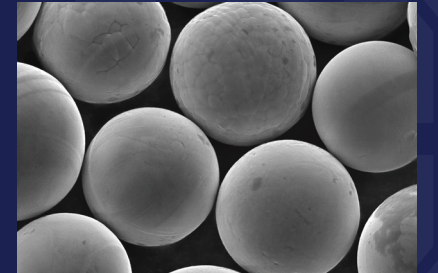
# BUILD WITH INFINITE POSSIBILITIES



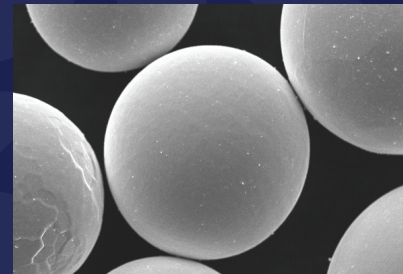
INCONEL 718



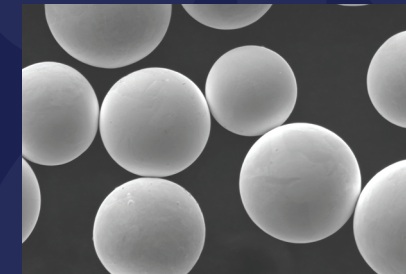
INCONEL 625



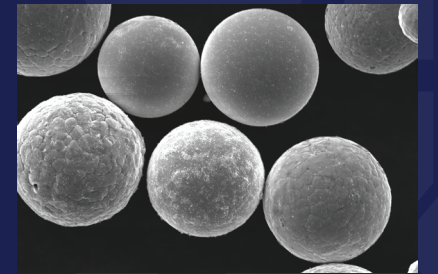
Ti-6Al-4V



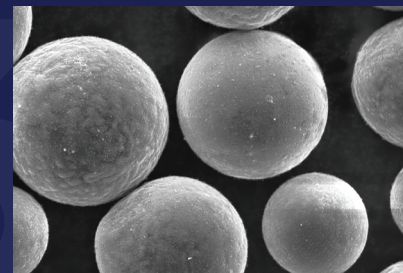
MOLYBDENUM



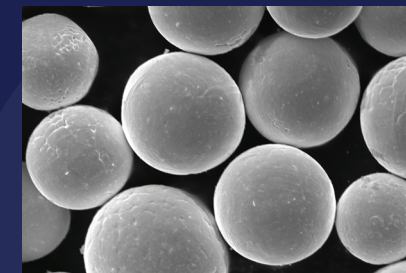
RHENIUM



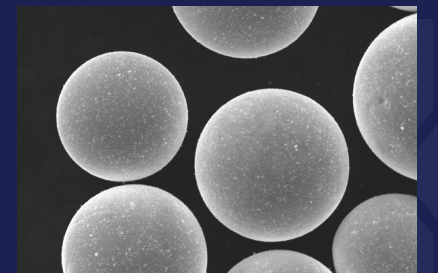
STAINLESS STEEL 17-4



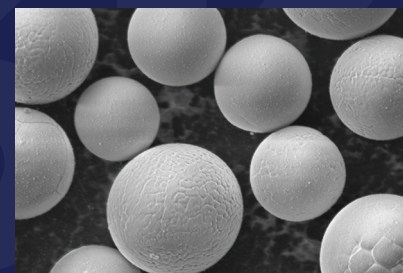
ALUMINUM AlSiMg



TANTALUM



TUNGSTEN



8% YTRIA STABILIZED ZIRCONIA

## THE PERFORMANCE OF UNIFORM PLASMA

6K Additive continues to expand the portfolio of best in class spherical, no satellite powders in any powder size distribution.

# UNIMELT®: THE WORLD'S MOST CAPABLE PLASMA PRODUCTION TECHNOLOGY

The most advanced production plasma system in the world, UniMelt uses high-frequency microwave plasma to produce advanced materials across a series of industries and applications.

## THE POWER OF UNIMELT GOES FAR BEYOND ADDITIVE MANUFACTURING



BATTERIES & STORAGE



SPECIALTY CERAMICS



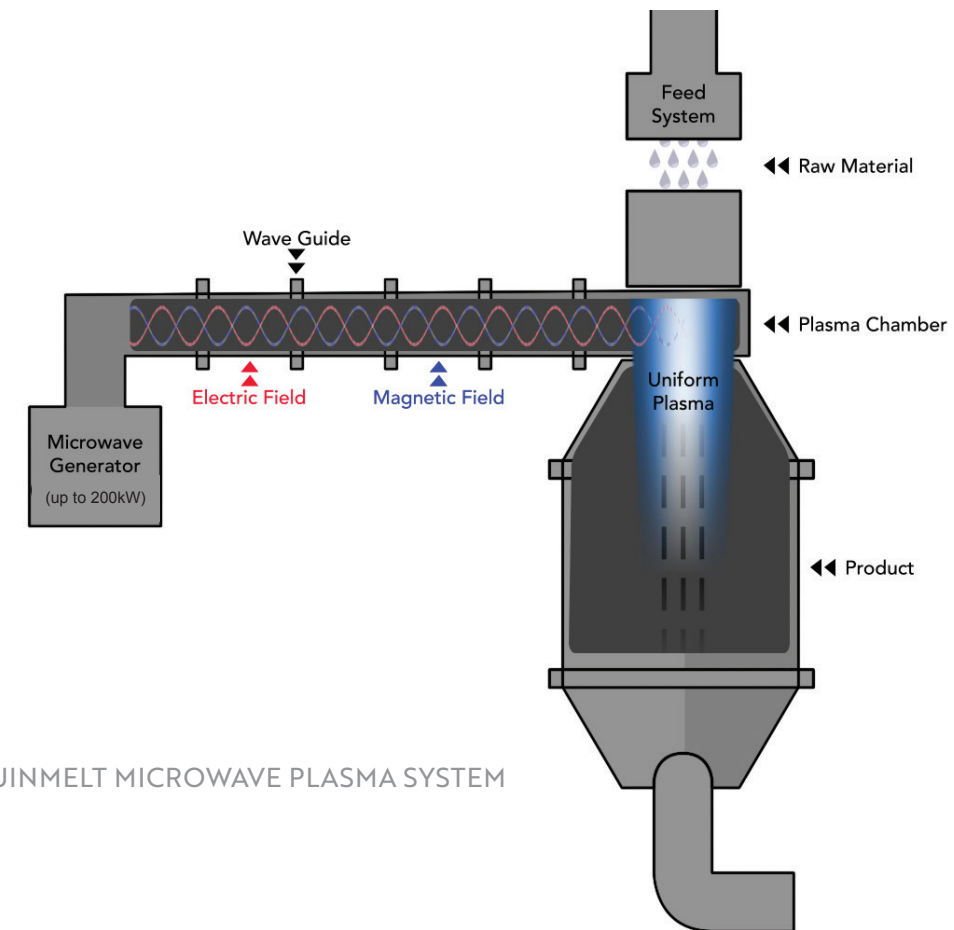
LIGHTING & DISPLAYS



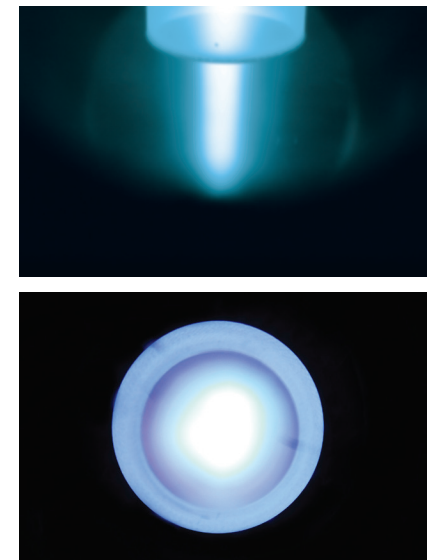
AEROSPACE & DEFENSE

# UNIQUELY 6K

Unimelt is **Not** Gas Atomization (GA) or Plasma Atomization (PA). The world's only microwave-based plasma metal powder production systems.



UNIMELT MICROWAVE PLASMA SYSTEM



THE MOST UNIFORM & PRECISE  
PLASMA IN THE WORLD

## AT 6000 DEGREES, UNIMELT IS CAPABLE OF PROCESSING CERAMICS, THERMOPLASTICS, METALS, AND ALLOYS

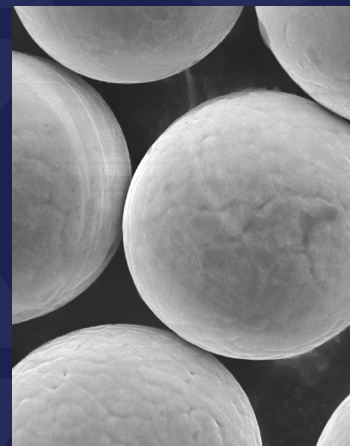
- Highly-uniform plasma production zone
- 99%+ efficiency (microwave to plasma)
- Continuous, zero-contamination process
- Inert, reducing, and oxidizing atmospheres

# BUILD WITH CONFIDENCE USING 6K POWDERS



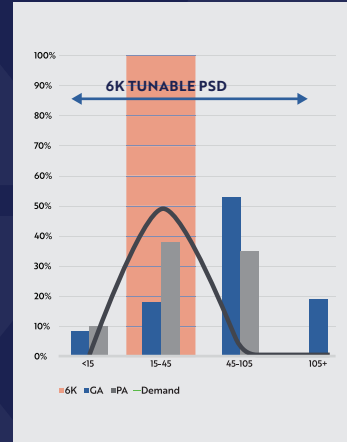
## ZERO POWDER POROSITY

Unlike competitive technologies, 6K's process delivers fully dense, highly-spherical powders without porosity.



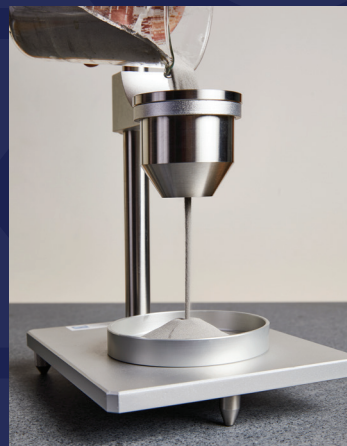
## HIGH SPHERICITY & NO SATELLITES

6K process delivers the highest-quality powder with high-sphericity void of any satellites.



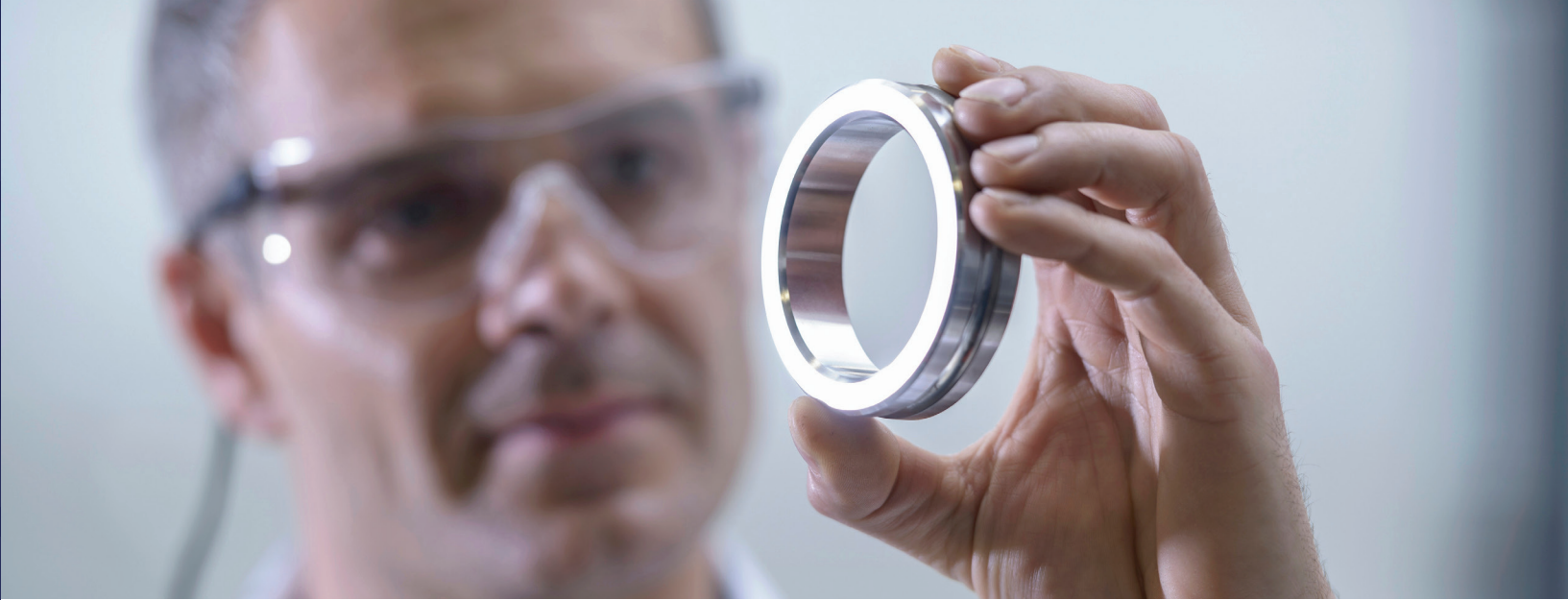
## 100% YIELD & TUNABLE PSD

6K's UniMelt process can deliver 100% yield into the target PSD for a sustainable process delivering exactly what our partners require.

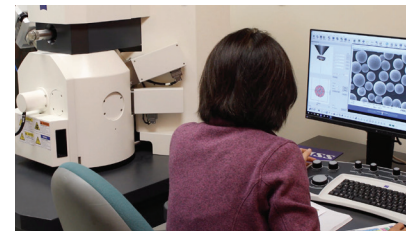


## HIGH FLOW AND SPREADABILITY

6K's process produces powders with high flowability and spreadability, ensuring maximum production in an AM system.

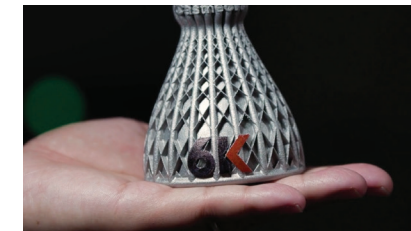


# HIGHEST PERFORMING POWDERS AS BACKED BY STRINGENT QUALITY CONTROL



## COMPREHENSIVE POWDER TEST & QC

Highest performing powders backed up by rigorous quality control: micro-CT, gas analysis, ICP, XRD, SEM, EDS.



## PART PRODUCTION & TESTING

Meeting or exceeding ASTM and ASM standards



## POWDER TRACKING & PREPARATION

Industry-standard methods for powder blending, lot control, and packaging.

# HIGH VOLUME 6K PRODUCTION SCALE PLASMA SYSTEMS

Highly reliable premium powder  
production



## THE WORLD'S MOST CAPABLE PLASMA PRODUCTION SYSTEMS, ENGINEERED FOR:

- Up to 100 tons per year
- Continuous feed process not limited by wire or ingot feedstock
- Capable of processing ceramics, metals, alloys, and thermoplastics
- Highly-uniform plasma zone
- High uptime systems, recipe-driven, remote operation
- Nano through 100s microns



## 6K ADDITIVE'S PRODUCTION TEAM HAS EXTENSIVE EXPERIENCE IN ALLOYS, METAL RECLAMATION, AND POWDERS PRODUCTION

- ISO9001 facility
- AS9100 (3Q20)
- Over 1 million lb titanium per year sold into premium alloying for aero, medical, and auto industries
- 80,000 sq ft metals conversion, alloys products, and AM powder production
- 40,000 sq ft new state-of-the-art powder production (1H20)

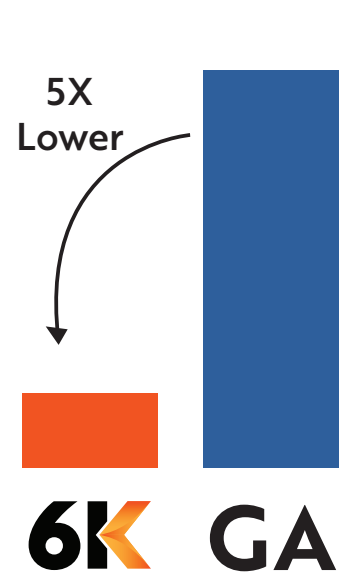
# BUILD SUSTAINABLY

Better powders, better parts, with a better business model – all done sustainably.

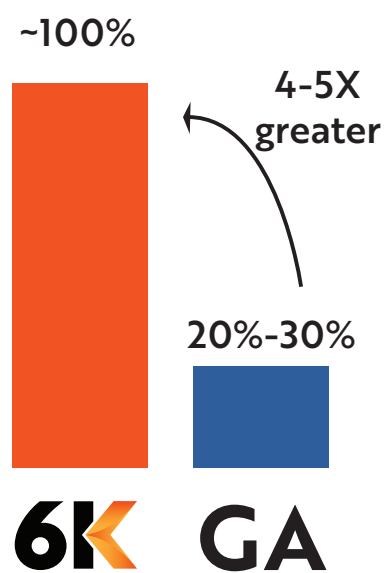


## POWDER PRODUCTION EFFICIENCIES

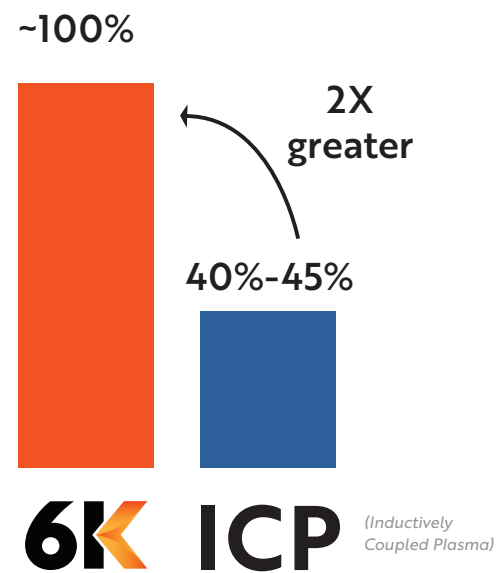
6K produces powders in a dramatically more sustainable process than conventional powder processes.



INERT GAS USAGE



POWDER YIELD FOR LPBF (15 TO 45 UM)



PLASMA EFFICIENCY

## DRIVING THE CIRCULAR ECONOMY

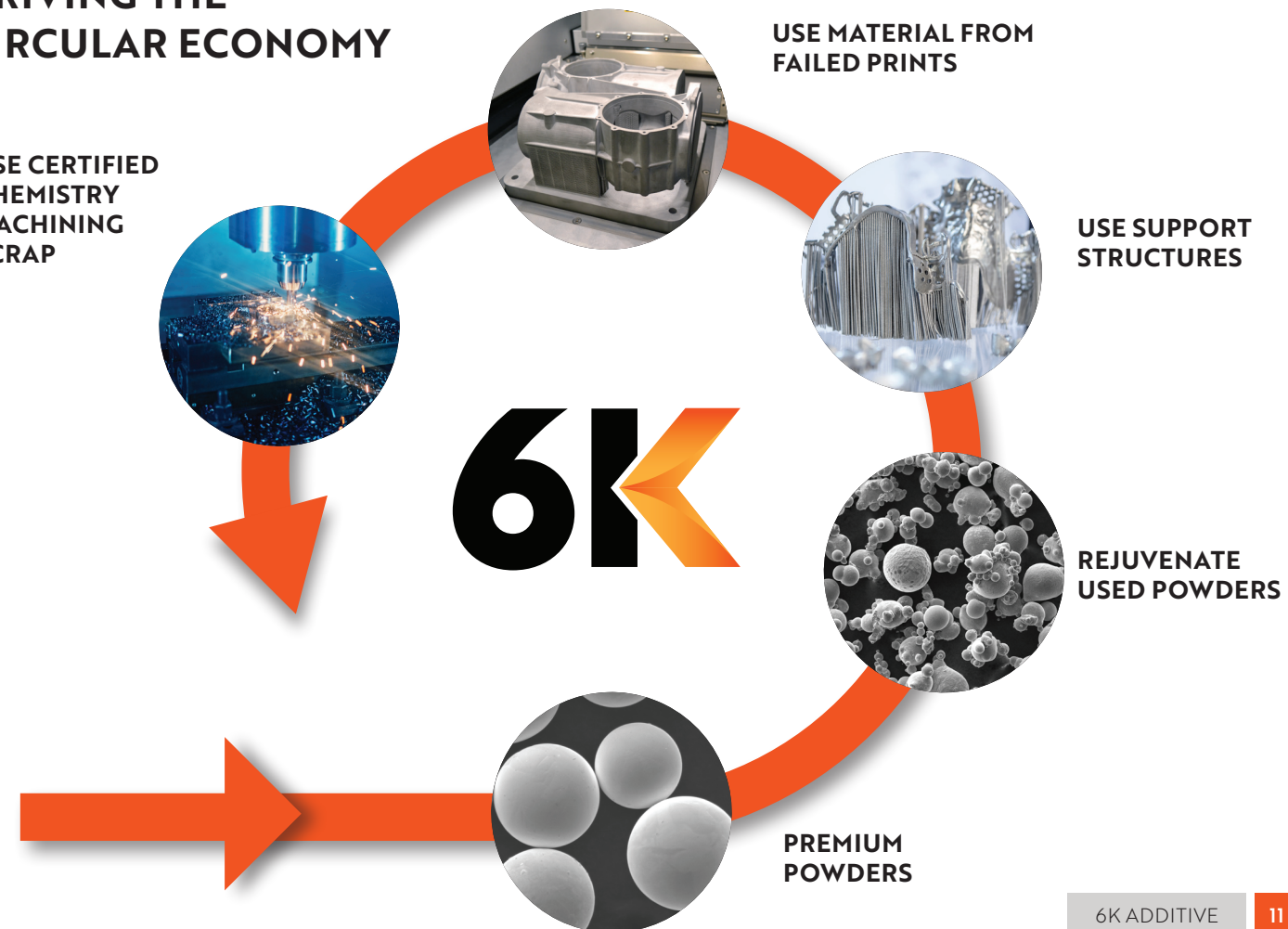
USE CERTIFIED CHEMISTRY MACHINING SCRAP

USE MATERIAL FROM FAILED PRINTS

USE SUPPORT STRUCTURES

REJUVENATE USED POWDERS

PREMIUM POWDERS



At 6K, we're breaking the bounds of chemistry to develop engineered materials into revolutionary products that will advance industries across additive manufacturing, renewable energy, aerospace, consumer electronics, and more. With 6K's advanced microwave plasma technology and sustainable processes, you can bring your innovations from ideation to development at speeds never before possible. We tailor-make the purest, best-in-class materials all with sustainability as a focus regardless of the industry we serve.

At 6K, we've assembled a team of material, process and production experts to deliver materials for today, tomorrow, and beyond. Whether it's in our innovation labs in Massachusetts or our production facility in Pennsylvania, our patented 6K technology and sustainable processes enable you to convert an infinite combination of materials that accelerate ideation and enable limitless possibilities



## **CORPORATE HEADQUARTERS**

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N. Andover, MA 01845,



## **GLOBAL MANUFACTURING CENTER**

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Burgettstown, PA 15021