ATO
BY 3DLAB

SRT
SHREE RAPID TECHNOLOGIES
Let's create future, together.

REACTIVE AND
NON-REACTIVE METALS

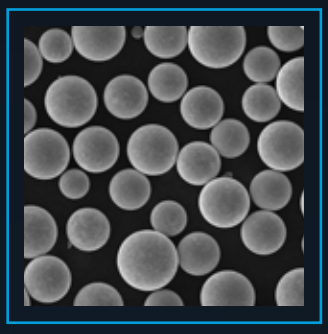
PRECIOUS METALS
MAXIMUM MATERIAL

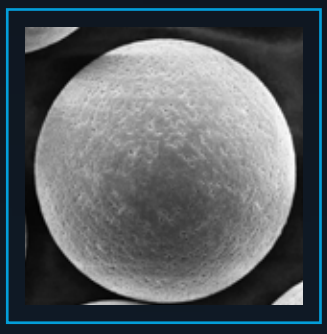
ATO LAB+

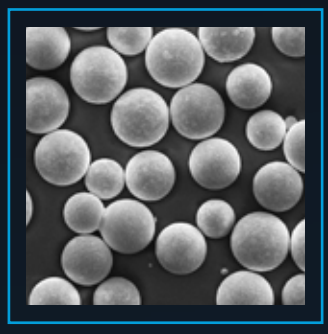
ULTRASONIC
LAB SIZE
METAL POWDER
ATOMIZER

ATO NOBLE

PRECIOUS
METALS
POWDER
ATOMIZER







ATO Technology uses ultrasonic vibrations to break a molten metal into small droplets that quickly solidify into metal powder under an inert gas protective atmosphere.

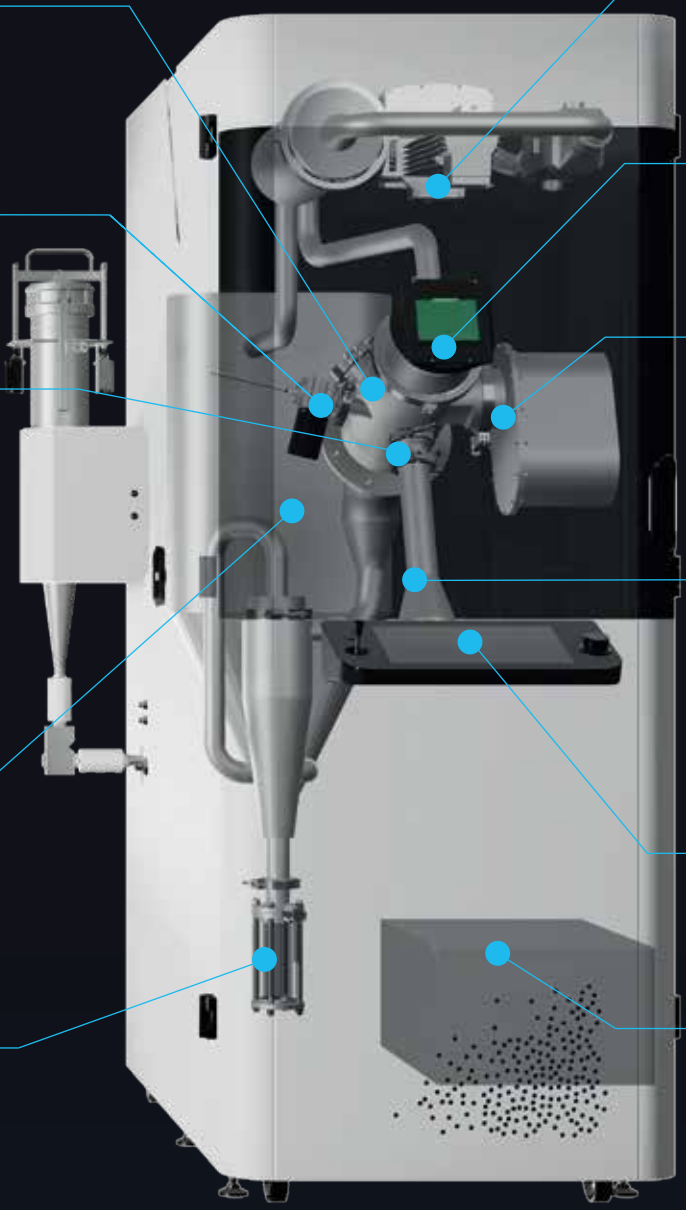
PROCESS CHAMBER
stainless steel process chamber cooled with water-jacket

MATERIAL FEEDER
select feedstock form with ATO feeders*

SONOTRODE
the very heart of the machine, build with patent pending technology and state-of-the-art nanoalloys, it provides unique process flexibility

FILTERS
designed to remove excessive fumes and allows to recirculate inert gas

ATO POWDER CONTAINER
compatible with ATO accesories, keeps argon shield



RECIRCULATION PUMP
gas-tight design keeps atmosphere oxygen - free

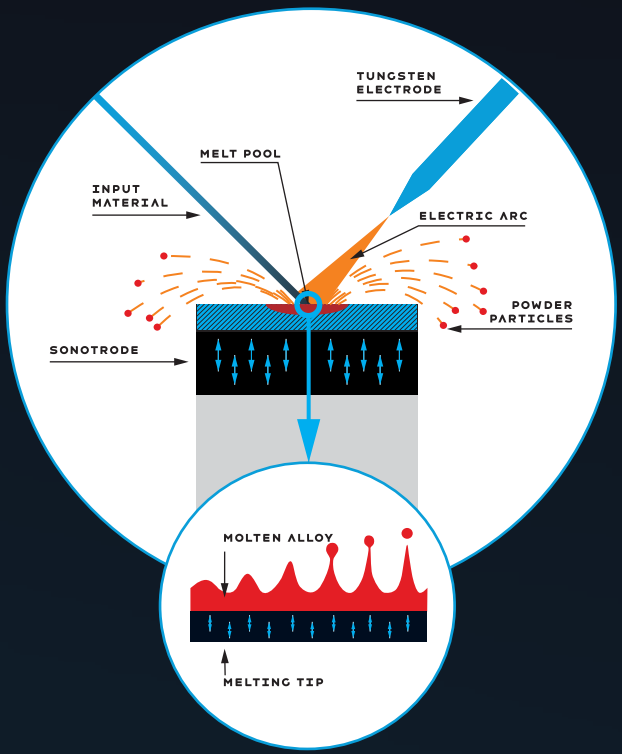
FRONT COVER
ensures view and protect eyes

TIG TORCH
welding arc is formed by a electrode and is maintained in a shielding gas covering

ULTRASONIC TRANSDUCER
the "vibration engine" brings energy necessary for eject the particles from melted metal

CONTROL PANEL
intuitive software, 10" touchscreen

TIG WELDING SOURCE
robust power supply guarantees stable process while efficient IGBT inverter minimize energy loss



Features and Benefits of ATO Technology

- High-quality metal powders with narrow particle size distribution
- Excellent sphericity and homogeneity of the powder
- Powders with high flowability for smooth 3D metal printing
- Ability to process a wide range of reactive and non-reactive alloys (steel, aluminum, titanium, nickel-based, and more)
- Suitable for commercial and research applications
- Compact and low-maintenance design
- Reduced media consumption for an efficient and cost-effective approach to metal powder production

ATO Devices

ATO Cast

Compact, professional-grade induction vacuum casting furnace

ATO Sieve

Compact, mobile, and user-friendly powder sieving station.

ATO Clean

Efficient and hands-free ultrasonic cleaning procedure for the atomizer components.

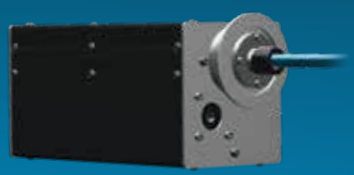
ATO Modules & accesories

Induction Melting System

Provides a clean and efficient way to melt metal powder feedstock

Wire Feeding System

Enables the feeding of wire material into the atomization chamber



Single Rod Feeding System

Designed for feeding single rods of metal powder feedstock

Multi Rod Feeding System

Enables the feeding of multiple rods of metal powder feedstock simultaneously

Passivation Module

Reduces the surface oxide content of metal powders

SPECIFICATIONS:

GENERAL INFORMATION	ATO LAB PLUS	ATO NOBLE
Process	Metal Powders Production	Metal Powders Production
Technology	Ultrasonic Atomization	Ultrasonic Atomization
Melting Method	TIG / Induction	TIG / Induction (As Module)
Sonotrode Type	Half-Wave Nanoalloy Sonotrode - Patented	Nanoalloy Sonotrode
Cooling Method	Liquid	Liquid
Processable Materials	Non-reactive & reactive alloys (e.g. Ti, Al, Zr-based alloys, intermetallics and refractory metals)	Ag, Au, Pt, Pd, Ir and more
Powder Quality	High flowability, spherical particles shape, narrow PSD, low oxygen content	High flowability, narrow particle size distribution
Powder Collecting System	Cyclone	Cyclone
Input Material	Wire (Upgradable)	Wire (Upgradable)
PARAMETERS		
Ultrasonic Frequency	20 / 35 / 52 kHz (Upgradable)	20 / 35 / 52 kHz (Upgradable)
O2 Level	< 10 ppm	< 10 ppm
System Throughput	Up To 0.3 L/H	Up To 0.25 L/H
Machine Weight (Uncrated)	650 kg	700 Kg.
Size (H x W x D)	1997 x 1070 x 1539 [mm]	1997 x 813 x 2000 [mm]
REQUIREMENTS		
Inert Gas	Argon	Argon
Cooling	Liquid & Compressed Air	Liquid & Compressed Air
Power Supply	400V, 10 KVA / 3 Phase	400V, 10 KVA / 3 Phase
Cleaning Unit	Ultrasonic Cleaner (ATO Clean)	Ultrasonic Cleaner (ATO Clean)
Powder Recycling System	Sieving Unit (ATO Sieve)	Sieving Unit (ATO Sieve)

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