

# PGA

## PLASMA GAS ATOMIZER

Retech Plasma Powder equipment utilizes our Plasma Arc Melting (PAM) technology in combination with gas atomization to produce powders that meet the needs of our customers. The versatility and capacity of Retech's PGA allow for atomizing any of a wide variety of refractory and reactive alloys, amorphous metal, or superalloys, and do so at production rates that will redefine powder metallurgy industry expectations. In addition, Retech can supply post-atomization powder handling and consolidation equipment.

### For Atomization Of:

- Reactive metals
- Refractory metals
- Amorphous metals
- High entropy alloys
- Super alloys
- Silicon

### Advantages of Plasma Gas Atomizer (PGA)

- Economically viable method to produce reactive and refractory alloy powders.
- Inherently scalable due to use of hearth melting via DC plasma and advanced atomization die technology.
- Feeder supplied tilting hearth allows production session to continue as long as the feeder is being reloaded and the collection tote is being changed.
- Significant reduction in powder cost - for improved yield, lower cost raw materials and recycling of revert.
- Successfully produced complex refractory High Entropy Alloy, TiAl, MoW, Ni alloys on PGA with best-in-class power performance.
- Versatile feedstock process allows for any feed formats suitable for plasma hearth melting, including loose sponge, compacts, scrap, and ingots.
- Accepts elemental feed, allowing alloying to occur directly in the hearth.
- Narrower Powder Size Distribution (PSD) and a better d50 average powder size selectability than alternative powder production methods.
- Current models achieve production rates of 1000 tons per year.
- Scalable to higher production rates.

### Plasma Gas Atomizer Specifications

System Type	Plasma Gas Atomizer
Feedstock Sizes	Ingot, compact, scrap, powder, etc.
Available Powder Handling Equipment	Yes

### Technical Data

Power Output	75 kW - 1200 kW
Reactive Metals	Yes
Non-Reactive Metals	Yes
In Process Alloying Capability	Yes

### Powder Data

Materials	Ti 6Al 4V
Powder Morphology	Spherical
Atomization Rate	300 - 1500 kg/hr
Size	D <sub>50</sub> : 50 - 120 μm

[Contact us to learn more.](#)

