

# PC

## PLASMA CASTING

**Retech combines state-of-the-art plasma arc melting (PAM) with their casting technology to offer plasma casting.**

Plasma Arc Melting systems use an electrically excited gas, typically helium or argon, to melt the materials in a sealed chamber, under inert atmosphere. The PAM process allows for low evaporative losses, thereby creating higher tolerance alloys that can be cast directly from the PAM without the requirement to remelt. Alloy processing can be designed based on individual chemistry to ensure proper homogeneity throughout the part.

The production of alloys using plasma arc melting systems improves alloy quality and homogeneity by ensuring that the materials that are melted are delivered to mold in a single batch. This process of melting and uniformly distributing the alloying elements is patented by Retech and has been used to produce gamma titanium aluminide alloys in addition to other complex difficult-to-process materials.

Each PAM casting system is custom designed based on the desired product and the materials to be processed. Retech's experience in PAM equipment uniquely positions us to be able to provide each system for optimal performance. This includes hearth design, torch power, material feed equipment, mold handling and process gas recycle systems.

Retech's experience allows us to provide additional equipment for any melt shop that can include material preparation, material handling and loading and mold handling equipment. Utilizing plasma melting technology is the best option for processing a wide range of reactive and refractory metals.

**Contact us to learn more.**

