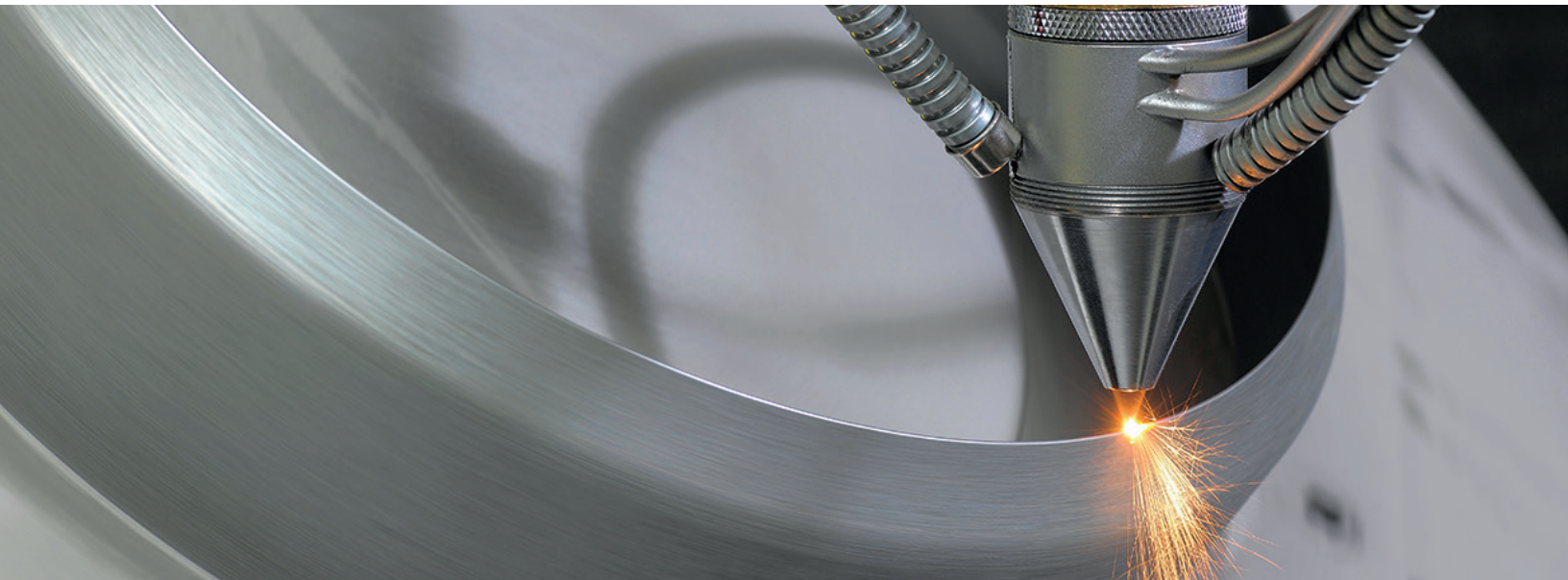


Additive Manufacturing

Improve your process with reliable, safe gas supply



- Avoid production interruptions with the right amount of gas in any size supply mode, available when you need it via our large distribution footprint
- Increase safety and minimize risk with Airgas equipment, installation, safety products and gas detection
- Get peace of mind from the industry experts in additive manufacturing processes, gas quality and packaging

Reliability, safety and expertise

Additive Manufacturing (AM) or industrial 3D printing is gaining momentum as it graduates to serial production. While some companies now benefit from its economic and technological potential, many struggle to introduce AM in the most efficient and safe way. Gases represent a small part of the production cost structure but play a critical role in final product quality, process stability and safety. Interrupting the build process due to lack of inert gas or poor quality ultimately impacts both cost and time. Argon, helium and nitrogen operate all along the process chain including:

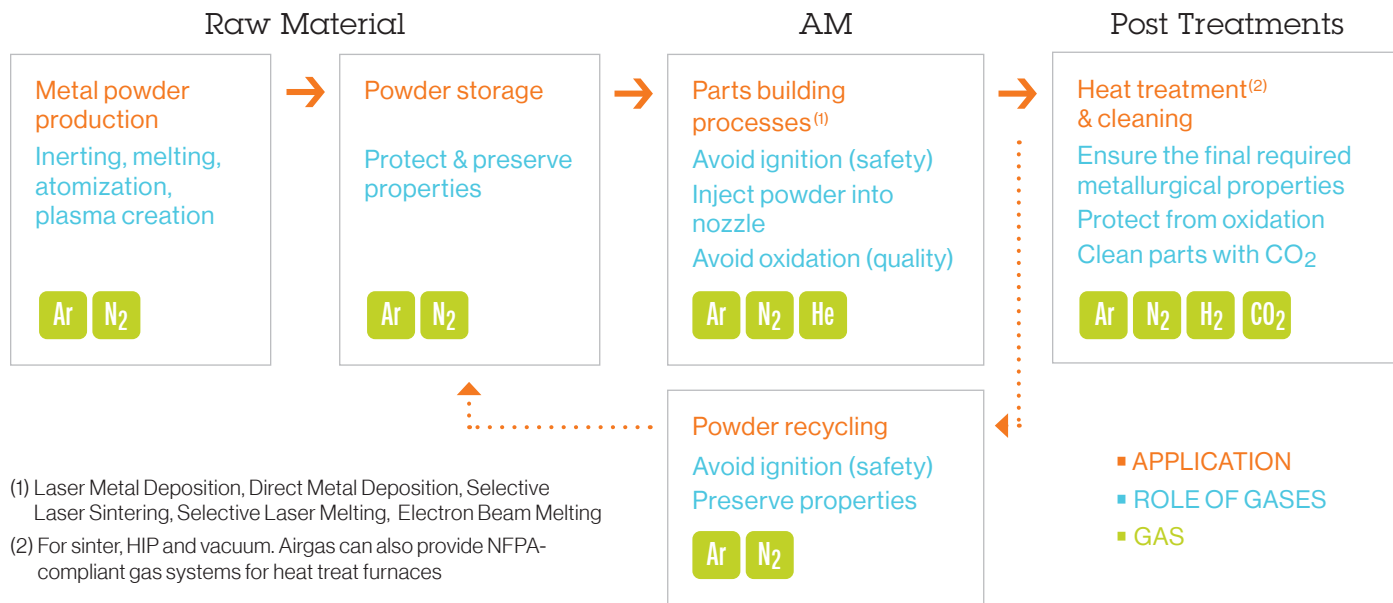
- Powder manufacturing, recycling and storage
- Parts building
- Post treatment

Airgas, an Air Liquide company, can help you access reliable gas supply to avoid runouts, improve safe delivery of gas to your process, and meet stringent scheduling requirements.

Additive Manufacturing

A comprehensive offer for reliable and safe gas supply

Airgas offers the quality gases you need for each step of your process — with minimal impurities and in any size supply mode. To reach superior performance using pure argon, Airgas has developed ARCAL™ Prime, with innovative packaging options designed for safety, quality, consistency and ease of use.



Supply modes and delivery equipment

Selecting the right gas supply mode is critical to avoid run outs and maintain your schedule. Airgas offers:

- A full range of gas supply modes from cylinders to bulk tanks to on-site gas generation installations
- Supply pressure capabilities up to 10,000 psig, with high-pressure storage options available
- One of the largest distribution footprints in the US ensures reliable gas delivery when and where you need it
- EZ-GAZ™ digital gas monitoring service monitors gas pressure levels in cylinders and bulk tanks, ensuring consistent and reliable gas supply
- Gas equipment ensures safe gas delivery to your process

FLOXAL™ on-site gas generation systems are available for large quantities of nitrogen and hydrogen. Ask your Airgas representative for more information.

Process expertise

Every day manufacturers rely on Airgas for custom gas supply, service and expertise. Airgas stands ready to help select the right gas supply for your unique production needs, as well as implement solutions designed to optimize your process and minimize risks. Our network of specialists includes expertise in bulk, welding and advanced metal fabrication, heat treating, supply chain, and safety—we've helped engineer custom gas supply for powder production, manage heat treatment audits with atmosphere analysis and process optimization, and specified, built and installed custom equipment. For more information please call us or visit Airgas.com.