

Assist Gas System

The type of assist gas will vary according to the process material. To achieve the best performance, the process gas must be delivered instantaneously and precisely at the specified pressures and flows. For continuous operation, an adequate supply of gases must be available at all times.

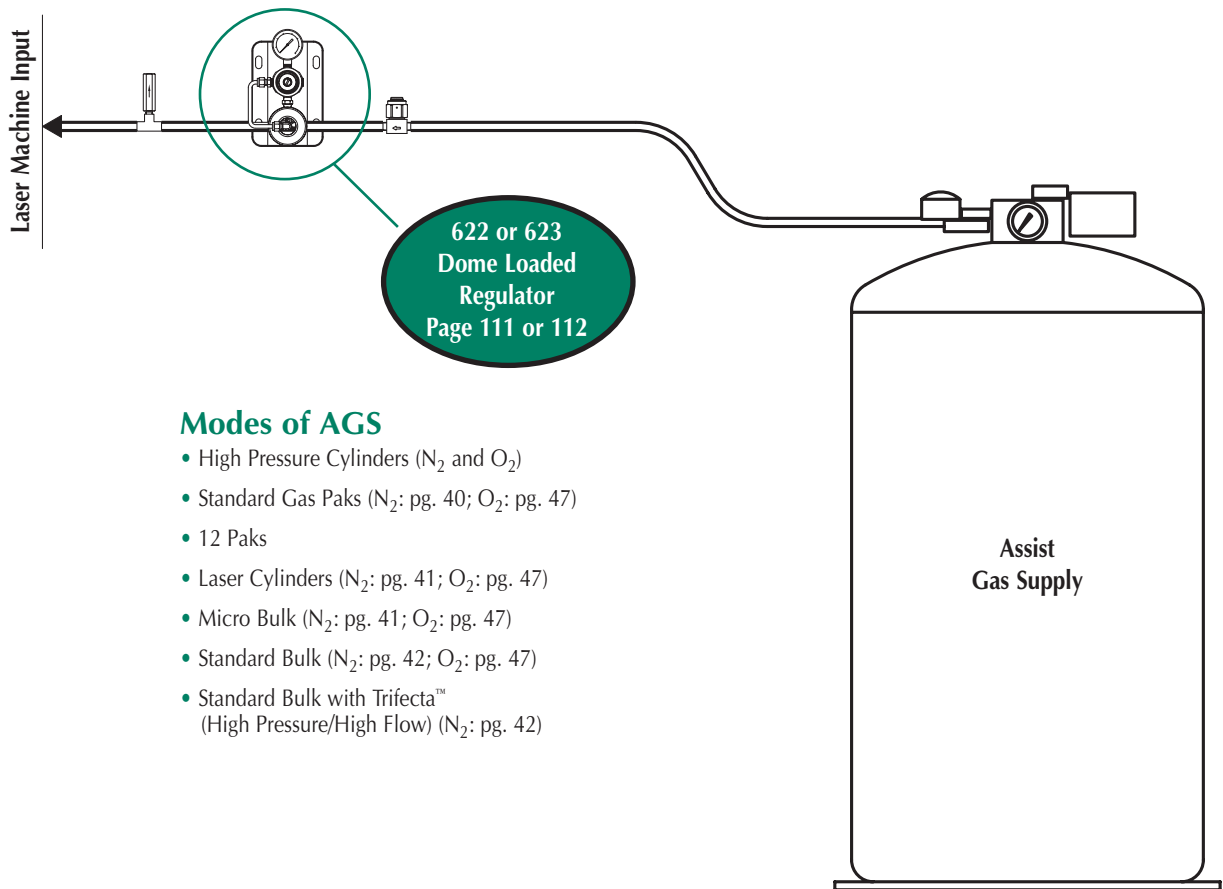
Mild Steel

When cutting mild steel, an oxygen assist gas can be used; the oxygen creates an exothermic chemical reaction with the material that provides up to 30% of the heat input thereby requiring minimal

pressures and flows. Higher powered CO₂ lasers (4-6 kW) may obtain greater cutting speeds with high-pressure nitrogen on thin gauge material. Nitrogen will also produce an oxide-free cut that is advantageous if the material cut is to be painted or powder-coated.

Stainless Steel

Stainless steel typically is processed with high-pressure nitrogen. Nitrogen pressure and flow levels are much higher than those of oxygen. Pressures as high as 500 PSIG and flows of over 5,000 cubic feet per hour may be required at the nozzle.



Modes of AGS

- High Pressure Cylinders (N₂ and O₂)
- Standard Gas Paks (N₂: pg. 40; O₂: pg. 47)
- 12 Paks
- Laser Cylinders (N₂: pg. 41; O₂: pg. 47)
- Micro Bulk (N₂: pg. 41; O₂: pg. 47)
- Standard Bulk (N₂: pg. 42; O₂: pg. 47)
- Standard Bulk with Trifecta™ (High Pressure/High Flow) (N₂: pg. 42)