



Laser Cutting Case Study

One of the largest family owned laser-cutting facilities in the United States runs 29 lasers. Part of their Current Nitrogen Supply was at 300psig coming off a cryogenic bulk nitrogen tank. To increase their cutting capabilities for the machines fed by the cryogenic system they needed to increase the pressure to 450 psig. As they already had a Hycomp nitrogen compressor installed with their on-site nitrogen generation system, it was a natural fit to install two additional high pressure boosters to assist the cryogenic system.

A Hycomp high suction pressure oil-free nitrogen booster was installed. Standard Hycomp packings were arranged in a way to accept and contain the 300-psig suction pressure. Hycomp gas compressors are oil-free and designed to prevent the introduction of oil into the gas stream, enabling the customer to maintain the nitrogen at high purity.

With this increased pressure, the customer can cut up to one inch carbon steel, 5/8 inch stainless steel and 1/2 inch aluminum on each machine. The plant is now able to run all 29 lasers concurrently at the high-pressure nitrogen demand.