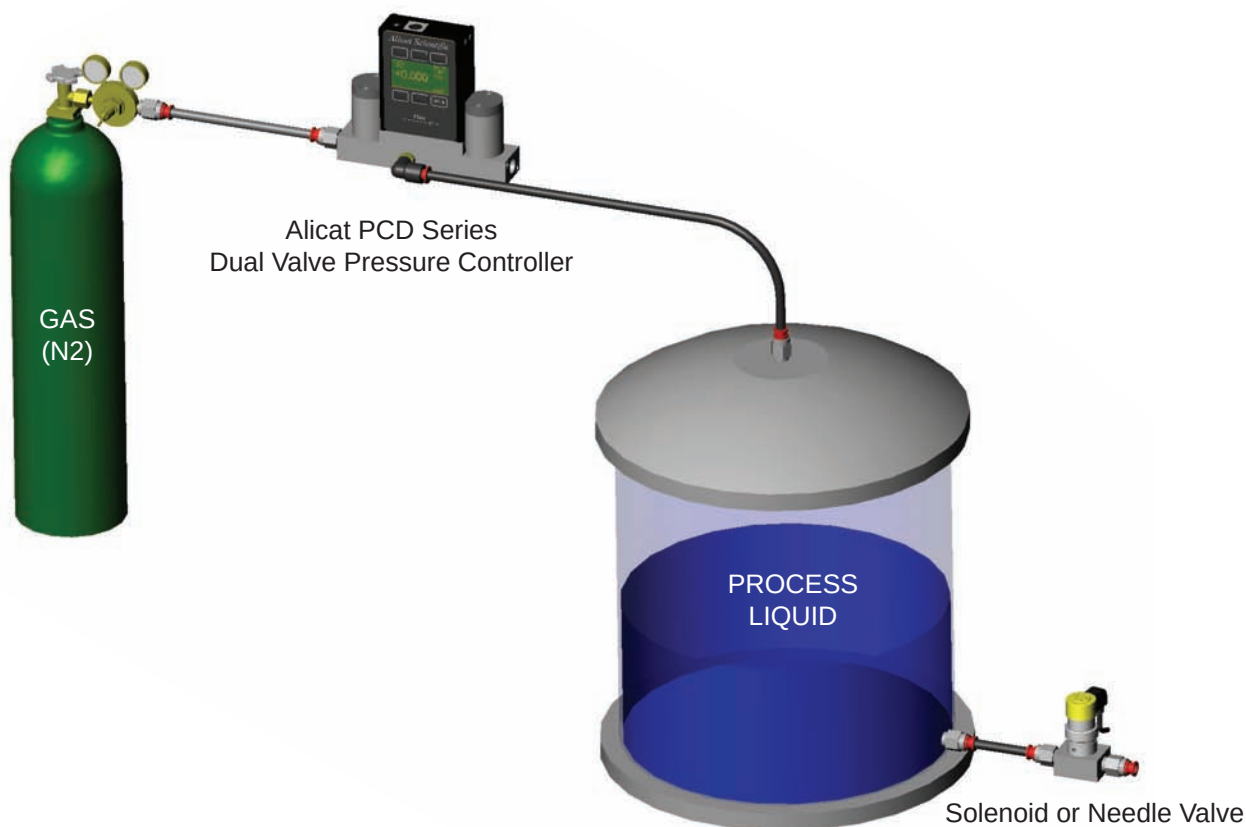


Fluid Dispensing Using Pressure Control



In this application, precise control of delivery of a fluid is accomplished through control of the head pressure on a liquid chamber using an Alicat Dual Valve Pressure Controller.

Typically, Nitrogen is used as the process gas and is vented to atmosphere through the downstream valve of the PCD. The pressure applied to the liquid allows for precision dispensing through activation of a solenoid or needle valve. Stability as high as 1 part in 5000 (.02% of FS) can be attained.

With Alicat's "RAM only" option, users can continually increase the head pressure in the chamber as the fluid level is decreasing. With processing times in the 400 microsecond range, very precise pressure changes can be applied.

This process is often used in silicon wafer polishing systems for the semiconductor industry as well as in some biotech applications.

