



## Modular Valve Banks Enable Real-Time Sampling Saving Time & Money

### Challenge:

Heat-treating steel is a lengthy process that requires specific metallurgical measurements and an incorrect gas level during the treatment process can result in a lot rejection. A local R&D company contacted Pneumadyne engineers to assist in the development of a method to test gases and ensure the consistent heat treatment of steel parts.

### Requirements

- Accommodate various sizes of heat-treat furnaces
- Connect to a computer which controls the sampling process
- Compatible with system gases
- Ability to purge the system to ensure a clean sample

### Solution:

To accommodate the various sizes of heat-treat furnaces, Pneumadyne engineers designed a modular valve bank consisting of four solenoid valves with stainless steel internals. The modular design of the system allows the number of valve banks to increase or decrease based upon the required number of test points in the process.

- Modular design to accommodate furnace size and test points
- Valves feature stainless steel internals
- Valve banks are connected with the system's computer
- Fast response times

The ability to test during the heat-treat process enables the gases and temperature to be adjusted immediately, guaranteeing consistency and decreasing the number of rejects. Real time sampling has also reduced heat treatment from 24 hours to 18 hours, saving time and lowering gas consumption.

### Benefits:

- **Fast response times**
- **Real time sampling reduces heat treat process by 6 hours**
- **Modular design accommodates furnace size and test points**

### Other Applications:

- **Medical**
- **Extraction Systems**
- **Fluid or Gas Distribution**

