HORIBA

Case Study

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Case Study: 0117

USA National Oceanic & Atmospheric Administration; NOAA specifies HORIBA MFCs for High Altitude Atmospheric Research

Key Achievements

- Customer specified HORIBA parts because they wanted to evaluate piezo vs solenoid control valve performance
- Parts installed and loaded onto research aircraft
- Results were monitored and the improvement experienced by the customer was seen to be excellent

The Problem

Researching environmental conditions requires putting delicate scientific instruments onto specially designed aircraft. This equipment is used to conduct world-leading research into environmental conditions and trends. The customer historically experienced some difficulty in establishing a continuous and stable flowrate from their existing Mass Flow Controllers – used to control the sample flowrate into various analysis instruments. Due to the importance of the data integrity, it was determined that a more stable sample flowrate was required.

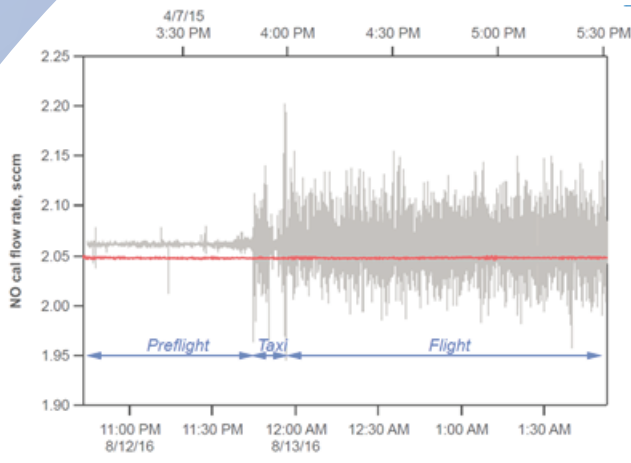
http://www.esrl.noaa.gov/csd/projects/atom/

The Solution

HORIBA recommended Z500 flow controllers with high performance piezo flow control valves. These valves are not subject to flow control variations caused by vibration and changes in pressure, as is the case with many solenoid control valves.

The Result

The results were excellent. The customer provided a before / after chart that clearly showed a vast improvement in flow stability. Grey indicates solenoid control valve mass flow controller output. Red indicates HORIBA piezo control valve mass flow controller output. Details of the project can be found here: http://www.esrl.noaa.gov/csd/projects/atom/ If you look closely at the image, you can see our products inside the electronics box.



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