

"The new flow meters are easy to install thanks to the Modbus interface and provide more data: flow, pressure and temperature. They can even be used in wet air lines, just like our own cars."

- Rick Alvarez,

Tesla



Client

Tesla

Location factory

California, USA

Industry

Automotive & Energy generation and storage

Product of VPInstruments

- 8 x VPFlowScope DP

ROI

6 months



About Tesla

Tesla is manufacturing world's most advanced electric cars and is leading the way to a green future without internal combustion engines. Tesla believes the faster the world stops relying on fossil fuels and moves towards a zero-emission future, the better. The company operates through two segments: automotive, and energy generation and storage. The automotive segment includes the design, development, manufacturing, and sales of electric vehicles. The energy generation and storage segment includes the design, manufacture, installation, and sale or lease of stationary energy storage products and solar energy systems to residential and commercial customers, or sale of electricity generated by its solar energy systems to customers.

All Tesla's cars are assembled in a plant in California, USA. Unlike the cars, the plant is not new at all. The plant was built in 1962 and was used to manufacture cars for GM/Toyota pushing out record breaking numbers of cars each week. As with many production plants, this plant had a compressed air system with great savings opportunities.

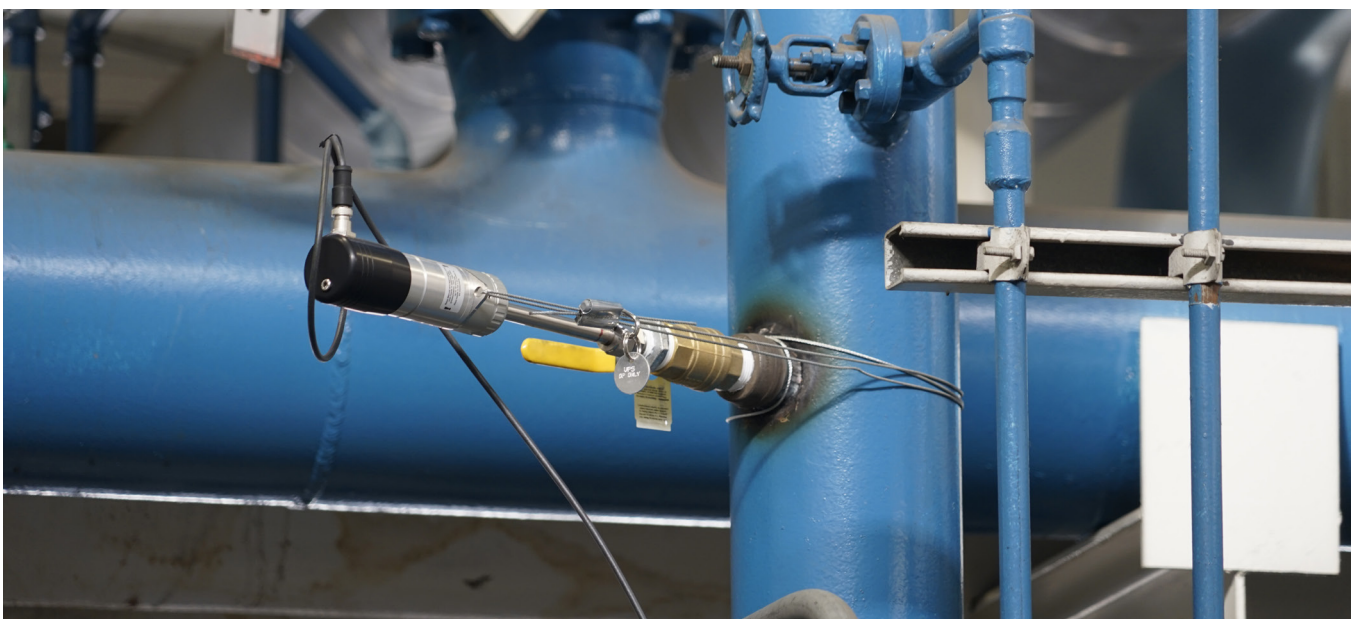
Added value

- \$220K annual savings on compressed air
- Permanent monitoring

Description

Tesla invested in a new central compressor control system combined with an upgrade of the compressor configuration. This control system consists of an iZ systems master controller, combined with VP Instruments flow sensors and saves Tesla roughly \$220K on their compressed air consumption annually. The new automation system can control various types and combinations of compressors ranging from centrifugal to rotary screw and reciprocating.

The entire system needs to be permanently monitored, tweaked and tuned as air demand changes over time. Here is where VP Instruments flow meters are a critical part of permanent monitoring system. Permanent monitoring of the demand in air flow allows decisions to be made on how to change the compressor control algorithm. The VPFlowScope DP flow meter measures bi-directional flow, pressure and temperature, enabling them to keep track of the efficiency of each machine. When the efficiency number changes, they can take action immediately to avoid wasting money. They have insight into which inlet filters are getting clogged, if the cooling system might have an issue, and they can detect when a non-return valve in the compressor is leaking thanks to the bi-directional measurement.



easy insight into energy flows™