

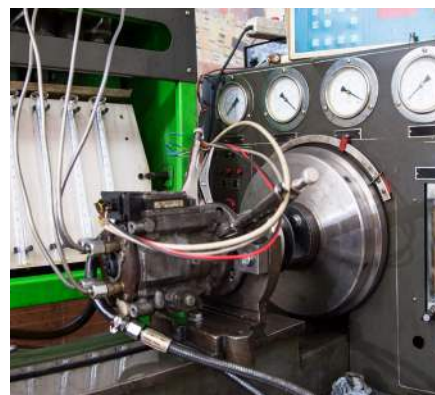


APPLICATION SPOTLIGHT

Coriolis Meter Monitors Pump Conditions in Auto Component Testing



Coriolis Meter Monitors Pump Conditions in Auto Component Testing



APPLICATION:

Automotive manufacturers test their equipment in the roughest conditions to ensure components withstand the test of time in meeting the highest performance and safety standards. For example, cooling systems for electric vehicles are tested to verify that batteries and electrical systems don't overheat and fail. As pumps circulate the cooling liquid throughout the system, they are tested on stands for long intervals under different temperatures and conditions that simulate real-world conditions. Flow meters are used during testing to track flow rates and monitor fluid conditions such as temperature and density when pumps are pushed to their limits.

PRODUCT SUPPLIED:

A TRICOR PRO Plus TCMQ-18K Coriolis Flow Meter offers robustness, performance, diagnostics, and connectivity needed for this application. The highly repeatable meter offers a small footprint for installation into systems with limited space. Units feature:

- Accuracy: 0.1%
- Pressure tolerance: up to 100 bar (1450 psi)
- Mass Flow Rate: 17,700 kg/hr (650 lb/min)
- Extremely short installation length

CHALLENGE:

Pumps are tested over extended periods in extreme hot and cold conditions to determine if operational efficiency decreases over time. To monitor fluid flow rates and conditions during circulation requires a flow meter that can perform accurately in extreme conditions with minimal pressure-drop to the cooling system.

SOLUTION:

A TRICOR PRO Plus Coriolis flow meter can withstand temperatures from -40°C to 200°C , which was essential to handle the conditions that the pump experienced in real-world operations. A low-profile design creates a minimum pressure drop in the system, while high accuracy of $\pm 0.1\%$ ensures the best data collection. Without moving parts, the Coriolis meters can operate round the clock without wear and tear while withstanding the hundreds of pump testing cycles without decreasing performance.

RESULTS:

The TRICOR PRO Plus Coriolis flow meter offers a lower cost option to other big-name flow meter brands without sacrificing performance. Easy setup and low maintenance mean less cost for maintaining test stands.