



APPLICATION STORY

ADROIT6200 combustion engine testbench



Druck's ADROIT6200 is a high-performance, high-accuracy pressure sensor engineered for harsh testing applications. With a robust, compact design, the ADROIT6200 is an analogue sensor with digital compensation to offer superior performance across a wide temperature range.

Application overview

Combustion engine test benches demand sensors that can perform in environments with significant fluctuations in pressure and temperature. The impact of thermal cycling and vibration often result in sensor failure.

With varying government policies on the enhancement of combustion engine to improve efficiency and reduction of emissions, OEMs are re-investing in test bench infrastructure.

This application story details the integration of Druck's ADROIT6200 pressure sensor into a leading car manufacturer's combustion engine testbench.

Viability of ADROIT6200 for the testbench application

The ADROIT6200 delivers accuracy of 0.04% FS (Best Straight Line) and maintains 0.2% total accuracy over a temperature of -40°C to $+125^{\circ}\text{C}$, outperforming market competition by a significant factor ([see our whitepaper for more details](#)).

Unlike traditional analogue sensors, Druck's ADROIT6200 uses digital compensation to provide stable performance over temperature and negate environmental effects, while retaining an analogue output.

With a response time of 1ms, the ADROIT6200 captures rapid pressure transients typical in combustion cycles. This responsiveness is critical for dynamic testing scenarios such as fuel injection, valve timing, and turbocharger performance.

The ADROIT6200 supports pressure ranges from 68 mbar to 350 bar, with options for gauge, sealed gauge, absolute and differential measurements. Technicians can re-zero the sensor post-calibration or pre-test using the ADROIT6000 App, streamlining setup and reducing downtime.

Summary

The ADROIT6200 stands out as the optimal sensor for combustion engine test benches.

Its blend of precision, speed, and resilience ensures reliable performance in demanding automotive R&D environments.

As the industry re-evaluates its combustion engine strategies, the ADROIT6200 is poised to become the sensor of choice for next-generation test rigs.

