

DYNAMIC PRESSURE CALIBRATION WORKSTATION



The K9913C Dynamic Pressure Calibration System features accurate dynamic calibration of pressure sensors over a mid pressure range (200 to 15,000 psi) using a stable tourmaline reference sensor. A pressure impulse is simultaneously applied to both the reference and sensor under test (SUT) to determine the sensitivity of a pressure sensor at a particular amplitude. By varying the amplitude level, the linearity of the SUT can also be determined. Using a high quality data acquisition system, the K9913C automatically measures, stores and reports the calibration results on an ISO 17025 compliant calibration certificate.

Dynamic pressure calibration is also available as an option with the 9155 series accelerometer calibration workstation. Option number 9155D-913 adds the 9913 hydraulic impulse calibrator, sensor and software verification to the 9155 base system. The PC system controller and data acquisition hardware are core to the base 9155 workstation, while the -913 control software runs integrated with the 9155 user interface and database. Model K9913C01 upgrades a PCB Model 913B02 to a turnkey K9913C.

BENEFITS:

- Saves time and improves efficiency by automating calibration routine
- Turn-key system includes all needed components
- Dynamically calibrate pressure transducers as they are used in the field
- Improves accuracy and consistency by implementing curve fitting to impulse calibration data
- Calibration data allows transducer trending for better instrumentation management

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MODEL K9913C

PERFORMANCE (ACTUATOR)

Manufacturer Model Number
Amplitude Range (useable)
Typical Rise Time
Typical Pulse Duration

PCB Model 913B02
200 to 15,000 psi (13.8 to 1034.2 Bar)
3 ms
6 to 8 ms

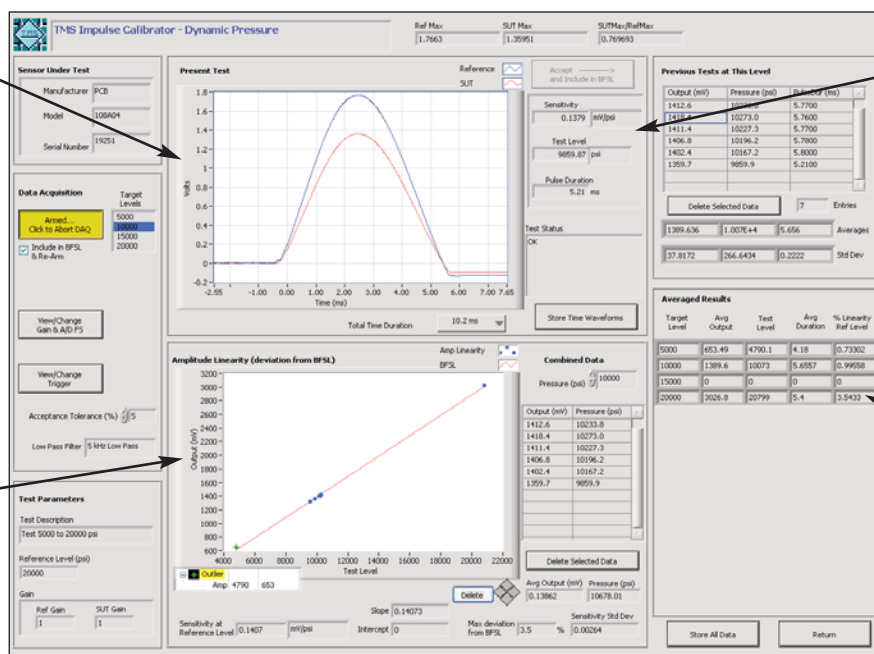
PERFORMANCE (REF TRANSDUCER)

Manufacturer Model Number
Sensitivity (+/- 15%)
Measurement Range
Resolution
Resonant Frequency
Linearity

PCB Model 136A
0.2 pC/psi (0.029 pC/kPa)
15,000 psi (1034.2 Bar)
0.5 psi (3.45 kPa)
≥ 1.0 MHz
≤ 0.5% FS

Displayed time data allows technician to view waveform and check for anomalies in the hydraulic impulse

Linearity plot provides a good overview of test results during the test



Software automatically computes values such as sensitivity, pressure level and pulse duration

Results table provides a quick look at the average results for all test levels

K9913C CALIBRATION SYSTEM COMPONENTS:

- *Qty 1 TMS 9913 Hydraulic Impulse Calibrator (includes PCB 913B02 actuator, 136A reference transducer, 443B02 charge amplifier and accessories.
- *Qty 1 PCB 108A04 Verification Pressure Transducer
- Qty 1 PC System Controller, includes PC, Flat Panel Monitor and Printer
- Qty 1 National Instruments PCI 4461 24-bit Data Acquisition Card
- Qty 1 PCB 482A21 ICP Sensor Signal Conditioner
- *Qty 1 TMS Automated Impulse Calibration Software
- Qty 1 Microsoft Access for Transducer Database
- Qty 1 Microsoft Excel for Certification Print Generation

*Included in 9155D-913 option for integration with 9155 Accelerometer Calibration Workstation

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