



MODEL K9535C

# PNEUSHOCK™ CALIBRATION WORKSTATION

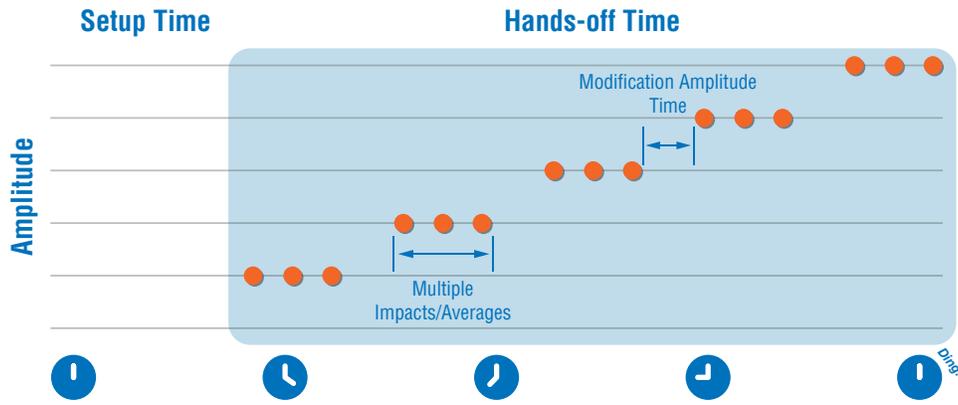
- Provides calibration and linearity check from 20 g – 10 000 g
- Automated control and acquisition of test points up to 10 000 g allowing for less operator hands-on time
- Uses state-of-the-art pneumatically actuated exciter (requires 90 – 150 psi) providing controlled and consistent impacts
- Includes variety of impact anvils and projectiles to tailor the impulse shape for frequency content and shock level
- Compatible with standard back-to-back shock reference accelerometers
- Provides graphical indication of sensor amplitude linearity
- Electronic control unit provides user automated and manual control of projectile drive pressure
- Digital pressure indication aids in control and repeatability

## AUTOMATED SHOCK CALIBRATION KIT

The Automated Shock Calibration Workstation Model K9535C allows the user to measure the sensor sensitivity and linearity at high acceleration levels up to 10 000 g in accordance with ISO 16063-22. This turnkey system includes a PC and data acquisition card, stores shock calibration results using Microsoft Access®, and is operated through the easy-to-use 9155D software interface. PneuShock™, a state-of-the-art shock exciter, makes use of a pneumatically operated projectile to strike an anvil and excite the sensor. By automatically controlling the air pressure and triggering the K9535C system allows for less operator hands-on time during the calibration process.

The PneuShock™ Calibration Workstation Model K9535C features an ICP® reference accelerometer, PCB Model 301A12, for calibrations according to ISO 16063-22. Printed certificates fulfill the requirements set forth by ISO 17025 for calibration certificates, and are fully customizable using the Microsoft Excel® environment. The system can easily be upgraded to a full Model 9155D Accelerometer Calibration Workstation, supporting vibration calibration sweeps according to ISO 16063-21.

The K9535C's automated solution provides calibration and linearity check up to 10 000 g by firing, recording data, and progressing to the next test point automatically. This allows more efficient verification of shock accelerometers with less manipulation per test point by the operator saving time. The PneuShock controller parameters are set via automated software control algorithm using the easy-to-navigate tabbed layout of the software.



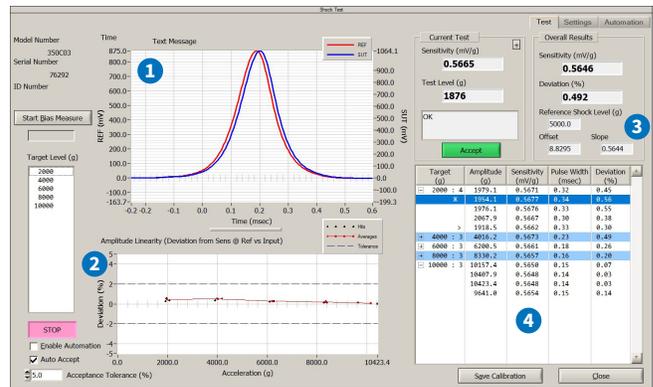
### Shock Calibration Timeline

Significantly reduce hands-on time when calibrating high amplitude accelerometers. Fires, records data, and proceeds to the next amplitude automatically

SPECIFICATIONS		
<b>Performance</b>		
Acceleration Range	20 g – 10 000 g	196 – 98 000 m/s <sup>2</sup>
Reference	PCB Model 301A12	
Type	ICP® Accelerometer	
Sensitivity	0.5 mV/g	
Pulse Width	0.1 - 3.0 ms	
DUT Mass	50 gram max.	
Uncertainty <sup>[1]</sup>	2.2%	
Automated Calibration	up to 10 000 g	
Sensor Mounting	¼ – 28 UNF Thread Size	
Air Supply Pressure	90 – 150 psi [6.2 – 10 bar]	
ISO 8573.1 Quality Class	4	
<b>Shock Calibration Configurations</b>		
<b>9155D-535</b>	Option for Accelerometer Calibration Workstation Model 9155D. PneuShock™ calibration option. Measures from 20 g – 10 000 g. Automated control up to 10 000 g.	
<b>K9525C</b>	Stand-alone, turnkey manual Shock Calibration System using PneuShock™ actuator. Measures from 20 g – 10 000 g.	
<b>9155D-525</b>	Option for Accelerometer Calibration Workstation Model 9155D. PneuShock™ calibration option. Measures from 20 g – 10 000 g.	
<b>Other Calibration Systems</b>		
<b>9155D</b>	Turnkey Calibration Workstation. Calibrates accelerometers per ISO 16063-21 from 0.1 Hz – 20 kHz and microphones per IEC 61094-5 from 20 Hz – 20 kHz.	
<b>9155D-830C</b>	Ceramic Insert Precision Air-Bearing Shaker Option for Model 9155 Calibration System. Includes 396C10 air-bearing shaker with a useable frequency range of 5 Hz to 15 kHz and ultra-low transverse motion per ISO 16063 recommendations.	
<b>9155D-831</b>	Precision Air-Bearing Shaker Option for Model 9155 Calibration System. Includes 396C11 air-bearing shaker with a useable frequency range of 5 Hz to 20 kHz and ultra-low transverse motion per ISO 16063 recommendations.	
<b>9155D-919</b>	Microphone comparison calibration option for 9155 systems. Supports 1/4" and 1/2" microphone calibration, with or without grid cap. Compliant to IEC 61094-5, operating from 20 Hz to 20 kHz.	

[1] Range 20 g to 10,000 g

### 9155-535 Software



1. Displayed time data allows technician to view waveform and check for anomalies in the shock pulse
2. Toggle between Deviation vs input or output vs input for real-time overview of test results
3. Software automatically computes sensitivity, acceleration, deviation, and detects errors such as zero shift
4. Condensable results table provides data on each shock pulse and averaged results at a glance