



Portable Vibration Calibrators

AT2030 | AT2035 | AT2040 | AT2050



Our four portable shakers offer a range of features and functionality, so you can choose the one that best meets your testing and vibration monitoring needs. All shakers are battery powered with a worldwide compatible charging system between 100–240 V power. Our portable shakers can be used in any setting—from the field to the laboratory—to verify or install machine condition monitoring sensors, systems, cabling, and connectors.

AT2030 is our basic adjustable-frequency amplitude shaker. AT2035 adds the ability to calculate transducer output sensitivity. AT2040 includes more enhanced shaker features, including a sensor simulation feature and advanced support for 4-20mA sensors and proximity probes. The AT2050 calibrator includes support for piezoresistive, variable capacitance, and MEMS-type sensors.



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Portable Vibration Calibrator Specification & Feature Comparison



AT2030



AT2035



AT2040



AT2050

Overview		Portable vibration calibrator	Portable vibration calibrator with sensitivity calculation.	Portable vibration calibrator with sensitivity calculation, simulator, and advanced 4-20mA and proximity probe Support.	Portable vibration calibrator with sensitivity calculation, simulator, and advanced support for piezoresistive, variable capacitance, and MEMS-type sensors.	
General	Frequency Range (operating, 100 gram payload)	5 Hz to 10,000 Hz 300 to 600,000 RPM	5 Hz to 10,000 Hz 300 to 600,000 RPM	5 Hz to 10,000 Hz 300 to 600,000 RPM	5 Hz to 10,000 Hz 300 to 600,000 RPM	
	Frequency Simulation Range	N/A	N/A	1 Hz to 11,000 Hz	1 Hz to 11,000 Hz	
	Maximum Amplitude (100 Hz, with no payload)	20 g pk (196 m/s ² pk) 15 in/s pk (380 mm/s pk) 50 mils p-p (1270 μm p-p)	20 g pk (196 m/s ² pk) 15 in/s pk (380 mm/s pk) 50 mils p-p (1270 μm p-p)	20 g pk (196 m/s ² pk) 15 in/s pk (380 mm/s pk) 50 mils p-p (1270 μm p-p)	20 g pk (196 m/s ² pk) 15 in/s pk (380 mm/s pk) 50 mils p-p (1270 μm p-p)	20 g pk (196 m/s ² pk) 15 in/s pk (380 mm/s pk) 50 mils p-p (1270 μm p-p)
	Maximum Simulation Amplitude	N/A	N/A	150 g pk @ 10 mV/g	150 g pk @ 10mV/g	
	Maximum Payload	800 grams	800 grams	800 grams	800 grams	
	Sensor Input Connections	N/A	IEPE, Charge, voltage	IEPE, Charge, velocity, voltage 4-20 mA vibration transmitters, proximity (AC and DC)	IEPE, Charge, velocity, voltage Piezoresistive, variable capacitance, MEMS.	
	Sensor Test Methods	N/A	Manual sensitivity Automatic sweep, with sensitivity and deviation relative to reference frequency. Includes phase data.	Manual sensitivity Automatic sweep, with sensitivity and deviation relative to reference frequency. Includes phase data.	Manual sensitivity Automatic sweep, with sensitivity and deviation relative to reference frequency. Includes phase data.	
	Sensor Select	N/A	Built-in transducer library	Built-in transducer library	Built-in transducer library	
Calibration Sheets	N/A	Automatic creation to memory Export to PDF and CSV Certificate includes test point with graph	Automatic creation to memory Export to PDF and CSV Certificate includes test point with graph	Automatic creation to memory Export to PDF and CSV Certificate includes test point with graph		
Accuracy	Acceleration (5 Hz to 9 Hz)	± 5%	± 5%	± 5%	± 5%	
	Acceleration (10 Hz to 10 kHz)	± 3%	± 3%	± 3%	± 3%	
	Simulation Performance	N/A	N/A	< 1% error at 10g	< 1% error at 10g	
Readout	Acceleration	g, m/s ² (peak and RMS)	g, m/s ² (peak and RMS)	g, m/s ² (peak and RMS)	g, m/s ² (peak and RMS)	
	Velocity (10 Hz to 1000 Hz)	in/s, mm/s (peak and RMS)	in/s, mm/s (peak and RMS)	in/s, mm/s (peak and RMS)	in/s, mm/s (peak and RMS)	
	Displacement (peak to peak)	mils, μm	mils, μm	mils, μm	mils, μm	
	Frequency	Hz, RPM	Hz, RPM	Hz, RPM	Hz, RPM	
Power	Internal Battery (sealed solid gel lead acid)	12 V DC, 6 amp hours	12 V DC, 6 amp hours	12 V DC, 6 amp hours	12 V DC, 6 amp hours	
	AC Power (for recharging battery)	100–240 V, 50–60 Hz, internal, standard plug	100–240 V, 50–60 Hz, internal, standard plug	100–240 V, 50–60 Hz, internal, standard plug	100–240 V, 50–60 Hz, internal, standard plug	
	Operating Battery Life	10 hrs (100 gram payload, 100 Hz 1 g pk) 1 hr (100 gram payload, 100 Hz 10 g pk)	10 hrs (100 gram payload, 100 Hz 1 g pk) 1 hr (100 gram payload, 100 Hz 10 g pk)	10 hrs (100 gram payload, 100 Hz 1 g pk) 1 hr (100 gram payload, 100 Hz 10 g pk)	10 hrs (100 gram payload, 100 Hz 1 g pk) 1 hr (100 gram payload, 100 Hz 10 g pk)	
	Accessory Power	USB 500 mA	USB 500 mA	USB 500 mA	N/A	
Physical	Sensor Connectors	N/A	BNC	BNC, DIN, terminal strip	BNC, DIN, terminal strip	
	Display	4.3-inch TFT LCD with 480×272 resolution	4.3-inch TFT LCD with 480×272 resolution	4.3-inch TFT LCD with 480×272 resolution	4.3-inch TFT LCD with 480×272 resolution	
	Controls	Dual knobs and touch screen	Dual knobs and touch screen	Dual knobs and touch screen	Dual knobs and touch screen	
	Dimensions (H × W × D)	10.6 × 9.7 × 6.9 in (27 × 24.6 × 17.4 cm)	10.6 × 9.7 × 6.9 in (27 × 24.6 × 17.4 cm)	10.6 × 9.7 × 6.9 in (27 × 24.6 × 17.4 cm)	10.6 × 9.7 × 6.9 in (27 × 24.6 × 17.4 cm)	
	Weight	16.4 lbs (7 kg)	16.4 lbs (7 kg)	16.4 lbs (6.9 kg)	16.4 lbs (6.9 kg)	
	Operating Temperature	32 °F – 122 °F (0 °C – 50 °C)	32 °F – 122 °F (0 °C – 50 °C)	32 °F – 122 °F (0 °C – 50 °C)	32 °F – 122 °F (0 °C – 50 °C)	
	Agency Requirements and Certifications *	A2LA Accredited NIST Traceable EMC:EN61326-1 LVD EN61010-1 ISO/IEC17025:2017 RoHS	A2LA Accredited NIST Traceable EMC:EN61326-1 LVD EN61010-1 ISO/IEC17025:2017 RoHS	A2LA Accredited NIST Traceable EMC:EN61326-1 LVD EN61010-1 ISO/IEC17025:2017 RoHS	A2LA Accredited NIST Traceable EMC:EN61326-1 LVD EN61010-1 ISO/IEC17025:2017 RoHS	
	*Simulator function not included in A2LA Scope.					