Agate TECHNOLOGY

Portable Vibration Calibrators

AT-2030 | AT-2035 | AT-2040 | AT-2050

Our three 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.

AT-2030 is our basic adjustable-frequency amplitude shaker. AT-2035 adds the ability to calculate transducer output sensitivity. AT-2040 includes more enhanced shaker features, including a sensor simulation feature and advanced support for 4-20mA sensors and proximity probes. The 2050 calibrator includes support for piezoresistive, variable capacitance, and MEMS type sensors.

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Portable Vibration Calibrator Specification & Feature Comparison

AT-2030

AT-2035

AT-2040

AT-2050

		AT-2030	AT-2035	AT-2040	AT-2050
	Description	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/s² pk) 15 in/s pk (380 mm/s pk) 50 mils p-p (1270 µm p-p)	20 g pk (196 m/s² pk) 15 in/s pk (380 mm/s pk) 50 mils p-p (1270 µm p-p)	20 g pk (196 m/s² pk) 15 in/s pk (380 mm/s pk) 50 mils p-p (1270 µm p-p)	20 g pk (196 m/s² 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 @ 10mV/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, certification with deviation relative to reference frequency.	Manual sensitivity, automatic sweep, certification with deviation relative to reference frequency.	Manual sensitivity, automatic sweep, certification with deviation relative to reference frequency.
	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/s² (peak and RMS)	g, m/s² (peak and RMS)	g, m/s² (peak and RMS)	g, m/s² (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	
Physical	Sensor Connectors	N/A	BNC	BNC, DIN, terminal strip	BNC, DIN, terminal strip
	Display	4.3-inch TFT LCD with 480x272 resolution	4.3-inch TFT LCD with 480x272 resolution	4.3-inch TFT LCD with 480x272 resolution	4.3-inch TFT LCD with 480x272 resolution
	Controls	Dual knobs and touch screen	Dual knobs and touch screen	Dual knobs and touch screen	Dual knobs and touch screen
	Dimensions (H x W x D)	10.6 x 9.7 x 6.9 in (27 x 24.6 x 17.4 cm)	10.6 x 9.7 x 6.9 in (27 x 24.6 x 17.4 cm)	10.6 x 9.7 x 6.9 in (27 x 24.6 x 17.4 cm)	10.6 x 9.7 x 6.9 in (27 x 24.6 x 17.4 cm)
	Weight	16.4 lb (7 kg)	16.4 lb (7 kg)	16.4lb (6.9 kg)	16.4lb (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 * *Simulator Function not included in A2LA Scope.	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