

Model : AT 2030



- Crushproof and Locking
- Digital closed loop control
- Long battery life
- State of the art digital electronics
- Class leading Frequency and Amplitude range.
- High resolution Color Touch Screen
- USB Support
- Advanced Computer Algorithms for accurate readout

ADVANCED FEATURES

Overview

AT-2030 is designed as a portable battery powered unit for the testing and calibration of accelerometers, velocity transducers, proximity probes, control equipment, and cabling. Model AT-2030 provides a closed loop controlled reference signal from 7 Hz to 10,000Hz for testing over a wide frequency range to meet various application needs. Measuring at 15 lbs. with exterior case measurements of 10.62" x 9.68" x 6.87" AT-2030 is the lightest and smallest of all portable vibration shakers.

ACCESSORIES

- ▶ PWR-100 Power Cable
- ▶ ACC- 100 Short Handle Wrench
- ▶ CAB 100 -Micro Dot (10-32) Cable
- ▶ MNT-104 1/4-28 Stud
- ▶ MNT-105 - 10-32 UNF Stud
- ▶ MNT 106 - 2-56 UNC Adapter
- ▶ MNT 107 -6-32 UNC Adapter
- ▶ MNT- 111 10-32 UNF Adapter

- ▲ CAB 101- Chadwick-Helmuth Velocimeter
- ▲ CAB-102 - IEPE Accelerometer 2 pin Mil
- ▲ CAB- 103 IEPE Accelerometer 3 pin Mil
- ▲ MNT-100 Replacement studs 1/4-28, 10-32. Adapters 2-56, 6-32,10-32 (3 each)
- ▲ PRX-100 Proximity Probe Adapter Kit
- ▲ PRX-101 Proximity Probe Proximity adapters M6 to 3/8
- ▲ PRX-102 – Steel Target
- ▲ MNT-109 Mounting Stud 1/4-28 to 8-32
- ▲ MNT- 110 Adapter 1/4-28M to 3/8-24F
- ▲ MNT-108 1/4-28 Adapter

Included

Not Included

SPECIFICATIONS FOR - AT 2030

GENERAL

Frequency Range (operating, 100 gram payload)	7 Hz to 10 kHz 420 to 600 k cpm
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 pk-pk (1270 μm pk-pk)

ACCURACY

Maximum Payload ^[1]	800 gram
Acceleration (30 Hz to 2 kHz)	±3%
Acceleration (7 Hz to 10 kHz)	±1 dB
Velocity (10 Hz to 1000 Hz)	±3%
Displacement (30 Hz to 150 Hz)	±3%
Amplitude Linearity (100 gram payload, 100 Hz)	< 1% up to 10 g pk

READOUT

Waveform Distortion (100 gram payload, 30 Hz to 2 kHz)	< 5% THD (typical) up to 5 g pk
Acceleration (peak and RMS)	g, m/s ²
Velocity (peak and RMS)	in/s, mm/s
Displacement (peak to peak)	mils, μm
Frequency	Hz, CPM

INPUT/OUTPUT

POWER

Internal Battery (sealed solid gel lead acid)	12 VDC, 6 amp hours
AC Power (for recharging battery)	110-240 Volts, 50-60 Hz
Operating Battery Life ^[2]	100 gram payload, 100 Hz 1 g pk 100 gram payload, 100 Hz 10 g pk

PHYSICAL

Dimensions (H x W x D)	8.5 in x 12 in x 10 in (22 cm x 30.5 cm x 28 cm)
Weight	18 lb (8.2 kg)
Sensor Mounting Platform Thread Size	1/4-28

[1] Operating range reduced at higher payloads. Reference manual for full details.
[2] As shipped from factory in new condition.


Superior accelerometer calibrator with AGATE quality.

AT-2035 is designed as a premium portable vibration calibrator capable of creating PDF certifications for most common sensor types. AT-2035 is the ideal calibrator for operators needing quick and reliable accelerometer calibration, as well as system checkout. AT-2035 offers a mix of features taken from our standard portable calibration shaker AT-2030 and our executive class shaker AT-2040.

Basic Features

- Crushproof and Locking
- Digital closed loop control
- Long battery life
- State of the art digital electronics
- Class leading Frequency and Amplitude range.
- High resolution Colour
- Touch Screen
- USB Support
- Advanced Computer Algorithms for accurate readout

Advanced Features

- Test all types of vibration sensors and transducers from a variety of accelerometer and eddy current probe manufacturers.
- Voltage, Charge (Piezoelectric), 4-20mA, and Proximity Probe Sensitivity readings using external power supply
- Adjustable current and voltage.
- Option to test and verify performance of vibration system meters, portable data collectors, and cabling by using an accurate and traceable signal generator to simulate a variety of sensors.
- Full Automatic Test Mode.
- Automatic PDF Certificate generation tailored to your custom specifications.

Panel Overview

- 1) Power ON/OFF button
- 2) Reference adapter and mounting location for test transducers.
- 3) Proximity probe mounting location
- 4) Dual USB for data transfer or accessory power.
- 5) 100V-240V plug in
- 6) Colour, resistive touch screen
- 7) Frequency adjustment / select button
- 8) Amplitude adjustment / select button
- 9) BNC Sensor Simulator Output (**Optional**)
- 10) BNC Sensor input sensor for sensitivity test


Agency Requirements and Certifications:

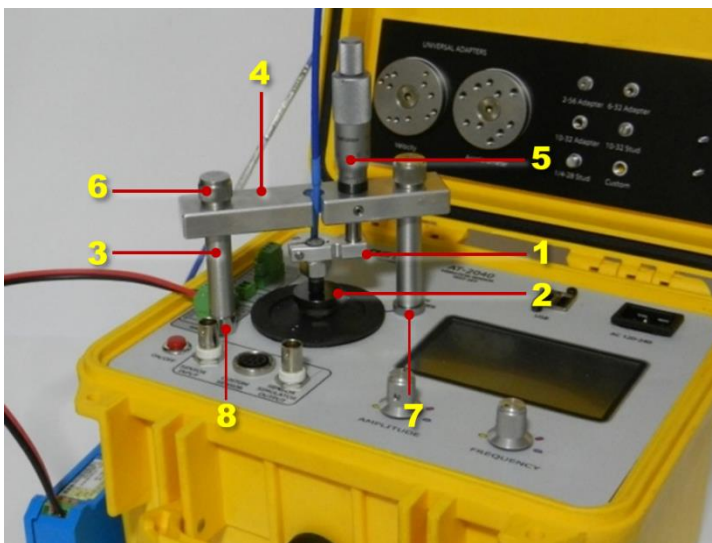
- NIST Traceable
- Accredited NIST Certified NVLAP Laboratory Tested
- EMC: CE Mark: Product Specific Standard EN61326-1: 2013
- LVD: CE Mark: Product Specific Standard EN61010-1: 2010
- RoHS

Standard Supplied & Optional Accessories



Ref.	Description	Part No.	Remark
1	Short Handle Aluminium Wrench	ACC-100	Included
2	5/32 Hex L-Wrench	ACC-101	Included
3	1/4 Mounting Spacer	MNT-101	Included
4	1/4-28 to 10-32 Stud	MNT-104	Included
5	1/4 -28 to 1/4 -28 Stud	MNT-105	Included
6	2-56 Adapter	MNT-106	Included
7	6-32 Adapter	MNT-107	Included
8	10-32 Adapter	MNT-111	Included
9	AC Power Cord 220-240V	PWR-101	Included
10	Universal Velocity Adapter	MNT-112	Optional
11	Universal Accelerometer Adapter	MNT-113	Optional
12	Micro Dot (10-32) to BNC Cable	CAB-100	Optional

Optional Proximity Probe Kit: Part No. PRX-100



Scope of Supply:

Ref.	Description	Part No.	Qty.
1	Proximity adapter, 6mm, 8mm, 10mm, 1/4" & 3/8"	PRX-101	1 each
2	Steel target (4140)	PRX-102	1 each
3	Mounting leg sizes: 1 1/2", 2" & 3"	PRX-108	1 set
4	Proximity probe mounting bar	PRX-109	1 each
5	Micrometer with non-rotating spindle	PRX-110	1 each
6	High quality large knobs	PRX-111	1 pair
7	Panel adapter	PRX-112	1 each
8	Magnetic adapter	PRX-113	1 each

Specifications - AT-2035 Accelerometer Calibrator
GENERAL

Frequency Range (operating, 100 gram payload)	7 Hz to 10 kHz (420 to 600,000 CPM)
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 pk-pk (1270 um pk-pk)
Maximum Payload ^[1]	750 grams
Sensor Test Method	Automatic Sweep or Manual Operation
Sensor Select	Built in transducer library
Calibration Sheets	Automatic Creation to memory Export to USB flash drive in PDF format Certificate includes test point with graph

ACCURACY

Acceleration (30 Hz to 2 kHz)	±3%
Acceleration (7 Hz to 10 kHz)	±1 dB
Velocity (10 Hz to 1,000 Hz)	±3%
Displacement (30 Hz to 150 Hz)	±3%
Amplitude Linearity (100 gram payload, 100 Hz)	< 1% up to 10 g pk
Waveform Distortion (100 gram payload, 30 Hz to 2 kHz)	< 5% THD (typical) up to g pk

READOUT

Acceleration	g, m/s ² (RMS, pk)
Velocity	in/s, mm/s, (RMS, pk)
Displacement	mils, um (pk-pk)
Frequency	Hz, CPM

INPUT / OUTPUT

Test Sensor Inputs	Charge, IEPE, Velocity, Proximity
Bias Measurement	Yes
Built in Excitation current and supply voltages for transducers	IEPE Current Source Built in Charge Amplifier
Monitor Reference Out	10 mV/g (nominal), Buffered Internal reference

POWER

Internal Battery (sealed solid gel lead acid)	12 V DC, 5 amp hours
AC Power (for recharging battery)	100-240V, internal, standard plug
Operating Battery Life	10 hours (100 gram payload, 100 Hz 1 g pk) 1 hours (100 gram payload, 100 Hz 10 g pk)
Accessory Power	USB 500mA

PHYSICAL

Sensor Connectors	BNC
Display	4.3 inch LED
Controls	Dual knobs and touch screen
Dimensions (H x W x D)	10.7" x 9.7" x 6.9" (27 cm x 24.6 cm x 17.5 cm)
Weight	15.2 lb (6.9 kg)
Sensor Mounting Platform Thread Size	1/4-28
Operating Temperature	0°C - 50°C (32°F - 122°F)

[1] Vertical
Specifications subject to change for improvements

AT-2040 is the leading portable vibration calibrator capable of measuring sensitivity readings for Voltage, IEPE, Charge accelerometers, and 4-20 ma transducers. Additionally, the AT-2040 provides a positive 24 volt supply for 4-20ma input sensors and negative 24 volts for proximity probe drivers.

In addition to testing sensors, the AT-2040 can test and verify performance of vibration system meters and cabling by using a built in signal generator to simulate current or voltage. AT-2040 can simulate a wide variety of accelerometers, proximity probes, and other transducers that can be fed back into drivers, cabling, connectors, and meters for quick work on system checkout and new system installs.

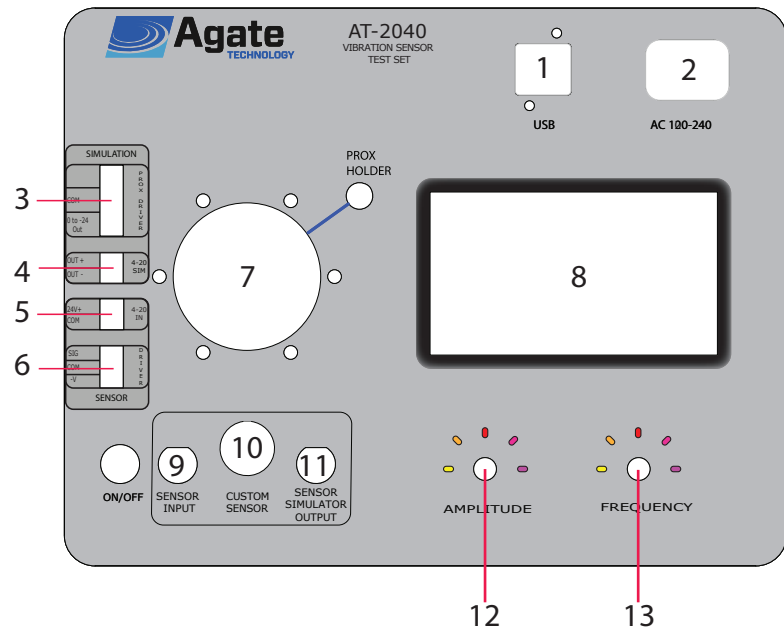
This advanced system also features an automatic test mode to calibrate accelerometers without user interaction. Simply choose your sensor type and AT-2040 will sweep through the accelerometer frequency range while plotting its deviation on the color LCD screen. At the completion of your test the results will be saved in PDF format and can be exported to USB devices at any time.

Model : AT 2040


- Sensor Simulation
- Built in -24v Proximity Probe Supply
- Programmable Sensor Current
- Programmable Sensor Voltage
- Automatic Mass Load Correction
- Touch Screen
- USB Support
- Sensor Library
- Advanced Computer Algorithms for accurate readout
- PDF Report Generation

ADVANCED FEATURES
INCLUDED ACCESSORIES

- ▶ Power Cable
- ▶ Short Handle Wrench
- ▶ Micro Dot (10-32) to BNC Cable
- ▶ 1/4-28 Stud
- ▶ 10-32 UNF Stud
- ▶ 2-56 UNC Adapter
- ▶ 6-32 UNC Adapter
- ▶ 10-32 UNF Adapter
- ▶ Universal Velocity Adapter Disc
- ▶ Universal Accelerometer Adapter Disc



- ▲ (1) Dual USB port for data transfer or accessory power.
- ▲ (2) 100-240v plug receptacle with built in power supply.
- ▲ (3) Proximity probe simulation plugin – capable of providing a test signal between 0 and -24 volts.
- ▲ (4) 4-20Ma simulation plugin – capable of providing a test signal between 4 and 20 Milliamps.
- ▲ (5) Input for sensitivity test of 4-20ma transducers and vibration transmitters. +24v power supply provided by connector.
- ▲ (6) Proximity probe driver input for radial and axial measurement. -24v provided by connector.
- ▲ (7) Reference adapter and mounting location for test transducers.
- ▲ (8) Color touch screen. 4.3" TFT LCD Display, 480x272 Resolution.
- ▲ (9) BNC Sensor input sensor for sensitivity test. Supports Charge, IEPE, Proximity Probes and Velocity sensors.
- ▲ (10) Custom Sensor In/Out – See rear view pinout diagram
- ▲ (11) BNC Sensor Simulator Output; Simulates a variety of transducer types using adjustable voltage and supply currents. Includes : Charge, IEPE , Variable voltage supply.
- ▲ (12) Adjustable Amplitude button. Also serves as back button when pressed.
- ▲ (13) Frequency adjustment button. Also serves as select button when pressed.

SPECIFICATIONS FOR - AT 2040
GENERAL
ACCURACY
READOUT
INPUT/OUTPUT
POWER
PHYSICAL

Frequency Range (operating, 100 gram payload)	7 Hz to 10 kHz	420 to 600000 CPM
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)	
Maximum Payload ^[1]	800 grams	
Sensor Test Method	Automatic Sweep or Manual Operation	
Sensor select	Built in transducer library	
Calibration Sheets	Automatic Creation to memory Export to USB flash drive in PDF format. No spreadsheet or user input required.	
Acceleration (30 Hz to 2 kHz)	±3%	
Acceleration (7 Hz to 10 kHz)	±1 dB	
Velocity (10 Hz to 1000 Hz)	±3%	
Displacement (30 Hz to 150 Hz)	±3%	
Amplitude Linearity (100 gram payload, 100 Hz)	< 1% up to 10 g pk	
Waveform Distortion (100 gram payload, 30 Hz to 2 kHz)	< 5% THD (typical) up to 5 g pk	
Acceleration	g pk, g RMS, in/s pk, m/s RMS	
Velocity	mm/s pk, mm/s RMS, in/s pk, in/s RMS	
Displacement (peak to peak)	mils p-p, μm p-p	
Frequency	Hz, CPM	
Test Sensor Inputs	Charge, IEPE, Velocity, Proximity 4-20ma transducer, 4-20ma vibration transmitters	
Bias Measurement	Yes	
Built in Excitation current and supply voltages for transducers	IEPE Current Source -24 Proximity driver source +24 4-20ma supply Variable voltage supply	
External Source In (Max)	1V AC RMS	
Transducer Simulation	Charge, IEPE bias and signal, 4-20ma loop simulator, Proximity probe driver (axial and radial)	
Monitor Reference Out	10 mv/G (nominal) Internal reference	
Internal Battery (sealed solid gel lead acid)	12 V DC, 5 amp hours	
AC Power (for recharging battery)	100-240 V, 50-60 Hz	
Operating Battery Life ^[2]	100 gram payload, 100 Hz 1 g pk	10 hours
	100 gram payload, 100 Hz 10 g pk	1 hours
Sensor Connectors	BNC, DIN, Terminal strip	
Display	4.3 inch LED	
Controls	2 dials with touch screen	
Dimensions (H x W x D)	8.5 in x 12 in x 10 in (22 cm x 30.5 cm x 28 cm)	
Weight	15.2 lb (6.9 kg)	
Sensor Mounting Platform Thread Size	1/4-28	
Operating Temperature	0°C-50°C (32°F-122°F)	
Agency Requirements and Certifications	NIST Tracable, Certified NVLAP Laboratory Tested EMC: EN61326-1 LVD: EN61010-1	