

Model Number
K394B30

CALIBRATION SHAKER SYSTEM – AIR BEARING SHAKER

Revision: E
ECN #:

PERFORMANCE

	<u>English</u>	<u>SI</u>
Stroke	0.4 in pk-pk	10 mm pk-pk
Frequency Range, frequency response testing	2 to 15000 Hz	2 to 15000 Hz
Frequency Range, resonant search testing	Up to 50 kHz	Up to 50 kHz
Acceleration Level (sinusoidal)		
Continuous (25 to 10000 Hz)	8.5 g pk	83 m/s ² pk
Intermittent (35 to 10000 Hz)	40 g pk	392 m/s ² pk
Maximum Payload	17.6 oz	500 gm
Lifting Spring	Lorentz – force coil	Lorentz – force coil
Air Supply Specifications		
Pressure	30 to 60 psi	2 to 4 bar
Recommended flow supply to regulator	1.5 ft ³ /min	0.7 L/s
Air-bearing flow rate (typical)	0.15-0.20 ft ³ /min	0.07-0.09 L/s
ISO 8573.1 Quality	Class 3	Class 3

Armature	Aluminum	Aluminum
Insert	Beryllium	Beryllium
Total mass	2.2 oz	62 gm
Sensor mounting thread size	¼-28 UNF	¼-28 UNF
Transverse Motion		
<921 Hz	5%	5%
<10000 Hz	10%	10%
<15000 Hz	30%	30%
Shaker Dimensions	6.5 x 5.25 inch	165 x 133 mm
Shaker Weight	22.3 lbs	10.1 kg

ELECTRICAL

Drive-Coil Resistance	1.0 Ohm (nominal)	1.0 Ohm (nominal)
Lorentz-Coil Resistance	2.8 Ohm (nominal)	2.8 Ohm (nominal)

INTERNAL REFERENCE ACCELEROMETER

Type	Quartz Shear ICP®	Quartz Shear ICP®
Sensitivity	10 mV/g	1.02 mV/m/s ²
Frequency Range (+/- 3dB)	0.35 to 30000 Hz	0.35 to 30000 Hz
Resonant Frequency	>70 kHz	>70 kHz

POWER AMPLIFIER

Output Voltage, max	38 V rms	38 V rms
Current Limit	18 A peak	18 A peak
Output Power	400 W	400 W
DC Current Supply	1.75 Amp	1.75 Amp

All specifications are at room temperature unless otherwise specified.

System Components

396C10: Air bearing shaker
080A200: Beryllium insert (1/4-28 mount) with internal reference accelerometer [2]
482A21: ICP® sensor signal conditioner
2100E23-C: SmartAmp™ AC power amplifier with integrated DC supply and air regulator
003C10: Reference accelerometer sensor cable
012A03: Signal conditioner output cable
012A01 (Qty 2): Shaker cable

Included Accessories

Output air filter assembly, includes filter and appropriate couplings
Input air quality (and associated filters and dessicants) must be provided by end user per ISO 8573.1 Class 3
Sensor mounting adapter kit, includes typical mounting adaptor studs and plates
Primary calibration of internal reference accelerometer via laser interferometer for ultra low uncertainty of 0.2% at 100 Hz and 159 Hz
Rack mount brackets for 2100E23-C SmartAmp
Power cables
Spare fuses

NOTES

- [1] DC coil payload limit. See manual for dynamic frequency response limits.
[2] 080A200 is standard armature insert supplied. Other units available include 080A199 (10-32 thread), 080A205 (M6 x 0.75 – 6H thread), and 080A206 (M8 x 1.0 – 6H thread).
[3] Typical, tested to ISO 16063-21:2003 recommendations
[4] These are typical values. TMS performs 100% acceptance testing to the suggested specifications of ISO 16063-21-2003.
[5] At 4 Ω load impedance, 1 kHz, THD 0.1%.
[6] Typical, over-current protection limited
[7] At 4 Ω load impedance, 1 kHz, THD 0.6%.

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In the interest of constant product improvement, specifications may change without notice.



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