

OVERVIEW

The unit is a small, handy, completely self-contained vibration reference source which can be conveniently used to validate the entire channel of transducers through measurement, monitoring or recording systems.

FEATURES AND BENEFITS

- Small and completely self-contained, ideal for field check of accelerometers, velocity transducers and proximity probes
- Lightweight, industrial Pelican® Storm Case³ dramatically improves durability and portability
- Rugged shaker element design with carbon fiber composite armature flexures
- Provides NIST traceable transducer verification from 7 Hz to 10 kHz



SPECIFICATIONS

General
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
Accuracy of Readout
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
Units of Readout
Acceleration: g pk, g RMS, m/s ² pk, m/s ² RMS
Velocity: mm/s pk, mm/s RMS, in/s pk, in/s RMS
Displacement: mils p-p, μm p-p
Frequency: Hz, CPM

Input/Output
External Source In (Max): 1V AC RMS
Monitor Reference Out: 10 mV/g (nominal), buffered internal reference output
Power Requirements
Internal Battery (sealed solid gel lead acid):
12V DC, 4 amp hours
AC Power (for recharging battery): 110-240V, 50-60 Hz
Operating Battery Life ²
100 gram payload, 100 Hz, 1 g pk: 18 hours
100 gram payload, 100 Hz, 10 g pk: 1 hour
Temperature
Operating 32° - 122° F (0° - 50° C)
Physical
Dimensions (H x W x D):
22 cm x 30.5 cm x 28 cm (8.5 in x 12 in x 10 in)
Weight: 8.2 kg (18 lb)
Sensor Mounting Platform Thread Size: 1/4-28

Notes:

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

HOW TO ORDER

MODEL	DESCRIPTION	CERTIFICATIONS
HI-913	Portable Shaker, variable frequency and amplitude control for accelerometers, velocity sensors and proximity probes, USB Data Transfer for a calibration test, rugged Pelican® Storm Case ³ , standard accessories and operates on a rechargeable battery.	

Notes:

3 Registered Trademark of Pelican Storm Cases

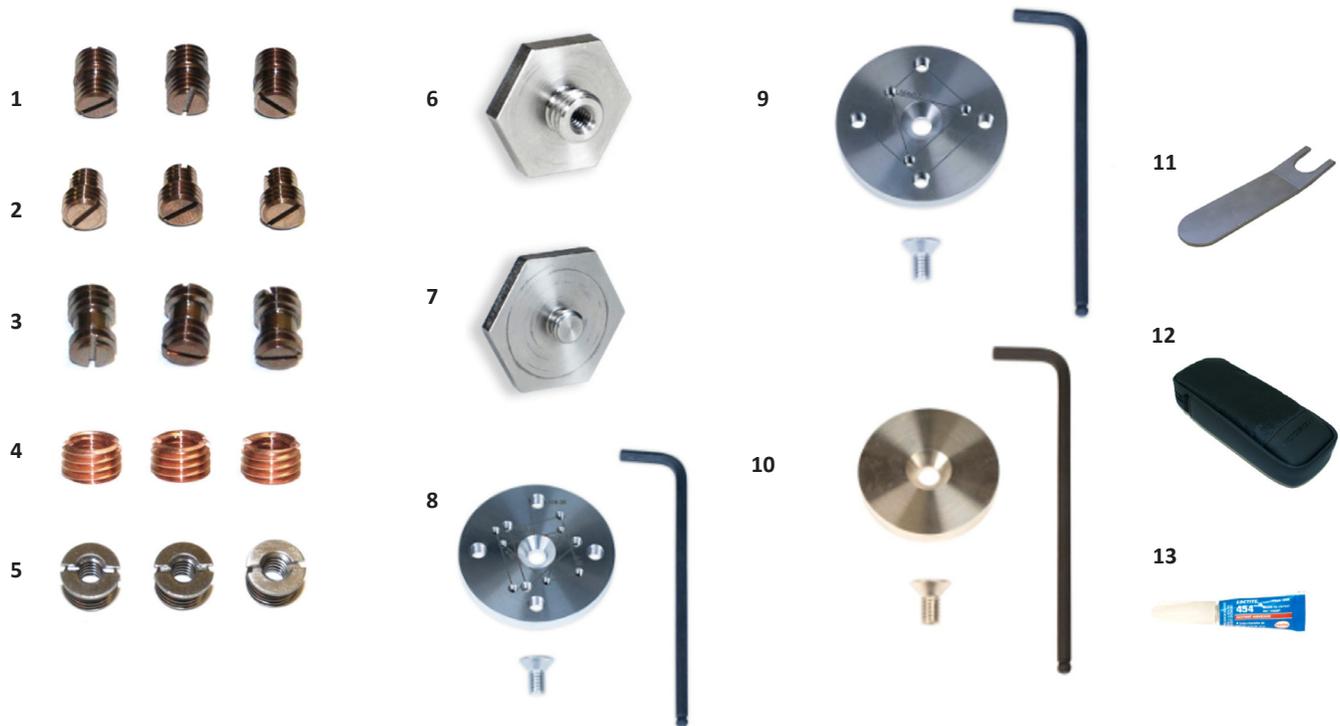
STANDARD ACCESSORIES

PART NO.	DESCRIPTION
	Power Cord and Plug Adapters (110-260 VAC, 50-60 Hz) - included
HI-937	Accessory Kit - included

NON STANDARD ACCESSORIES

PART NO.	DESCRIPTION
HI-223-9M (Metric units)	Eddy Current Probe Test Kit with Micrometer- fits HI 903 or HI 913 only
HI-223-9E (English units)	
0205-0049	Mounting Spacer
0228-0136-01	Mounting Plate, Magnetic 2" Dia, 1/4" thick
0228-0141-01	Stud, 1/4-28 to M8 (Metric)
0228-0137-01	Adapter stud. 1/4-28 UNF to 3/8-24 (HI 5701VT)
0228-0075-01	4140 Steel Target (incl w/ 223/224 kits)
0228-0071-02	Velocity/Universal Transducer Adapter, w/ screw
0228-0070-03	Bushing, 1/4-28 to 2-56 UNC
0228-0070-04	Bushing, 1/4-28 to 6-32 UNC
8841-0101	Adapter, 1/4-28 UNF (M) TO 1/4" NPT (F)
8841-0100	Adapter, 1/4-28 UNF (M) TO 1/2" NPT (F)
8841-0106	Adapter, 1/4-28 UNF (M) TO 3/8-24 UNF (F)
8841-0113	Adapter, 1/4-28 UNF (M) TO M8 x 1.0 (F)
8841-0114	Adapter, 1/4-28 UNF (M) TO M10 x 1.25 (F)

HI-937 ACCESSORY KIT (Included with each HI-913)



Contents:

1. 3 Mounting studs, 1/4-28 to 1/4-28 x 0.365" long
2. 3 Mounting studs, 10-32 to 1/4-28 x 0.30" long
3. 3 Mounting studs, 5-40 to 5-40 threads, without shoulder
4. 3 Thread adaptors, 10-32 internal thread x 1/4-28 external thread
5. 3 Thread adaptors, 6-32 internal thread x 1/4-28 external thread, stainless steel
6. Calibration mounting adaptor: 0.625" hex flat base for sensors with 5-40 integral stud, stainless steel. For 1/4-28 threaded shakers
7. Calibration mounting adaptor: 1" hex flat base for adhesive mounting sensors, stainless steel. For 1/4-28 threaded shakers
8. Calibration mounting adaptor: Circular plate for 3 and 4-hole bolt pattern high-temp vibration sensors with:
 - Triangular hole patterns on a 1.00" (25.4mm) diameter circle, uses a 4 40 mounting thread.
 - Triangular hole patterns on a 1.20" (30.5mm) diameter circle, uses an 8 32 mounting thread.
 - Square hole patterns on a 1.375" (35mm) diameter circle, uses a 6 32 mounting thread.
 - Square bolt pattern with holes 1.19" (30.2mm) apart on all sides, uses a 1/4 28 mounting thread.
9. Calibration mounting adaptor: Circular plate for 3 and 4 hole bolt pattern high-temp vibration sensors with:
 - Triangular hole pattern on a 1.19" (30.2mm) diameter circle, uses an M4x0.7 mounting thread.
 - Square bolt pattern with holes 1.18" (30mm) apart on all sides, uses an M6x1.0 mounting thread.
10. Universal Transducer Adaptor Circular Plate: Circular plate for custom mounting holes to be drilled and tapped. Includes 1.75" diameter x 0.25" deep generic mounting pad (stainless steel), 1/4-28 flat head cap screw, and a 5/32" hex wrench
11. Mounting Wrench
12. Accessory Pouch
13. Loctite 454- Quick bond Gel (for use with accelerometer adhesive mounting bases to fill gaps on rough surfaces)

Note: Metrix is continuously improving our products. Please refer to our website to download the latest version of this document.

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