STEK Vibration Meter VIB-15

- In accordance with ISO 2954, used for periodic measurements, to detect out-of-balance, misalignment and other mechanical faults in rotating machines.
- Specially designed for easy on site vibration measurement of all rotating machinery for quality control, commissioning, and predictive maintenance purposes.
- Individual high quality accelerometer for accurate and repeatable measurements.
  Wide frequency range (10Hz~10kHz) in acceleration mode.
- Measure: Displacement, Velocity, Acceleration
- AC output socket for headphones and recording.
- Optional headphones for use as electronic stethoscope.
- Bearing condition monitoring function.
- Use USB data output with connection PC

Optional:
Headphones
PC Software

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Product Description

The Vibration Tester Applied to the periodic motion measurements to detect moving mechanical imbalances and misaligned. Designed for on-site measuring various mechanical vibration, for quality control, running time and prior equipment maintenance data. Selection of high-performance accelerometers to achieve accurate, replicable measurement It has a bearing condition measurement function.

Product Feature

- In accordance with ISO 2954, used for periodic measurements, to detect out-of-balance, misalignment and other mechanical faults in rotating machines.
- Specially designed for easy on site vibration measurement of all rotating machinery for quality control, commissioning, and predictive maintenance purposes.
- Individual high quality accelerometer for accurate and repeatable measurements.
- Wide frequency range (10Hz~10kHz) in acceleration mode.
- AC output socket for headphones and recording.Optional headphones for use as electronic stethoscope.
- Bearing condition monitoring function.
- Use USB data output with connection PC.
- Provide Bluetooth data output choice.

Product Specifications

Transducer	Piezoelectric accelerometer
Accuracy	±5%+2 digits
Measurement Range	Displacement : 0.001-4.000 mm equivalent peak-peak / 0.04-160.0 mil
	Velocity : 0.1-400.0 mm/s true RMS / 0.004-16.00 inch/s
	Acceleration : 0.1-400.0 m/s² equivalent peak / 0.3-1312 ft/s² / 0.0-40g
Frequency Range	Displacement : 10Hz. ~ 1kHz.
	Velocity : 10Hz. ~1kHz.
	Acceleration : 10Hz. ~ 10kHz.
Operating Conditions	Temperature : 0-50 ℃
	Humidity : below 95% RH
Analogue Output	AC output 0~2.0V peak full scale (load resistance: above 10k)
Power Supply	4x1.5vAAA (UM-4) Battery
Size	140x70x30mm
Weight	260g (Not including Batteries)

Product Accessories

Standard Accessories	Main Unit
	Magnetic base
	Probe (cone) / Probe (spherical)
	Portable box
	Brochures
	Piezoelectric sensor
	Carrying Case
	Operation Manual
Optional Accessories	Headset
	USB data output
	Bluetooth data output

Buying Guide

When you choose the model number of a STEK instrument, the default is standard delivery. If you need other optional accessories, please contact STEK Instruments

Vibration Meter VIB-15

With STEK VIB 15 evaluate the severity of overall vibration levels as per ISO Standard 10816-2 to evaluate the severity of overall vibration levels. You can compare the overall vibration value measured with the product to this table to identify the vibration severity.

Vibration Severity - ISO 10816-1

Machine	mm/s	Class I Small machines	Class II Medium machines	Class III Large rigid foundation	Class IV Large soft foundation
Vibration velocity vrms	0.28	Good	Good	Good	Good
	0.45	Good	Good	Good	Good
	0.71	Good	Good	Good	Good
	1.12	Satisfactory	Good	Good	Good
	1.80	Satisfactory	Satisfactory	Good	Good
	2.80	Unsatisfactory	Satisfactory	Satisfactory	Good
	4.50	Unsatisfactory	Unsatisfactory	Satisfactory	Satisfactory
	7.10	Unacceptable	Unsatisfactory	Unsatisfactory	Satisfactory
	11.20	Unacceptable	Unacceptable	Unsatisfactory	Unsatisfactory
	18.00	Unacceptable	Unacceptable	Unacceptable	Unsatisfactory
	28.00	Unacceptable	Unacceptable	Unacceptable	Unacceptable
	45.9	Unacceptable	Unacceptable	Unacceptable	Unacceptable

ISO 10816-1 This standard contains general guidelines for machine vibration measurements on non-rotating parts

Built-in acceleration sensor parameters:		
Sensitivity (typical)		10.00 mV / m/s² ±5 % (1 g = 9.8 m/s²)
Measurement parameters:		
Acceleration	Range	0.1 m/s² to 199.9 m/s² Peak (r.m.s. *√2)
	Resolution	0.1 m/s²
	Accuracy	±(5 % + 2 digits) (LO: 10 Hz to 1 kHz) ±(10 % + 5 digits) (HI: 1 kHz to 10 kHz)
Velocity	Range	0.1 mm/s to 199.9 mm/s r.m.s.
	Resolution	0.1 mm/s
	Accuracy	±(5 % + 2 digits) (10 Hz to 1 kHz)
Displacement	Range	0.001 mm to 1.999 mm Peak-Peak (r.m.s. *2√2)
	Resolution	0.001 mm
	Accuracy	±(5 % + 2 digits) (10 Hz to 1 kHz)
Piezoelectric sensor parameters	Frequency Response	10 Hz to 15 kHz
Amplitude units	Acceleration	g, m/s²
	Velocity	mm/s
	Displacement	mm
Environmental Specifications	Operating Temperature	-10 °C to 50 °C
	Storage Temperature	-30 °C to 60 °C
	Operating Humidity	30 % to 90 % (non-condensing)
	Operating Altitude	2,000 m
	Storage Altitude	12,000 m
	Ingress Protection Rating	IP 40
	Vibration Limit	500.0 m/s² peak
	Drop Test	1 m
	EMC	IEC 61326-1: Portable Electromagnetic;
	CISPR 11	Group 1, Class A

General specifications:	
Battery Type	2 AAA, IEC LR 03 3 V dc
Battery Life	Continuous measurement for 25 hours
Size (L x W x H)	24.1 cm x 7.1 cm x 5.8 cm
Weight	220 g
Headphone Jack	Stereo Audio Output Jack (3.5 mm Audio Plug)
External Sensor Jack	M12 connector

EQUIPMENT TYPE:	Good	Acceptable	Alarm
Cooling tower fans			
Long hollow shafts	0 – 9.525	9.525 – 15.24	15.24 –
Short coupling belt drives	0 – 6.985	6.985 – 10.795	10.795 –
Short coupling direct drives	0 – 5	5 – 7.5	7.5 –
Compressors			
Reciprocating	0 – 8.125	8.125 – 12.7	12.7 –
Screw compressors	0 – 6.985	6.985 – 10.795	10.795 –
Centrifugal, with or without gearboxes	0 – 5	5 – 7.5	7.5 –
Centrifugal, internal gearboxes, axial measurement	0 – 5	5 – 7.5	7.5 –
Centrifugal, internal gearboxes, radial measurement	0 – 3.81	3.81 – 6.35	6.35 –
Blowers (fans)			
Roots blowers	0 – 7.5	7.5 – 11.43	11.43 –
Belt-driven fans	0 – 6.985	6.985 – 10.795	10.795 –
General direct connection fans	0 – 6.35	6.35 – 9.525	9.525 –
Primary air fans	0 – 6.35	6.35 – 9.525	9.525 –
Large blowers	0 – 5	5 – 7.5	7.5 –
Large induced draft fans	0 – 4.445	4.445 – 6.985	6.985 –
Fans mounted directly on shafts	0 – 4.445	4.445 – 6.985	6.985 –
Axial flow fans	0 – 3.81	3.81 – 6.35	6.35 –
Motors/generators			
Belt drive	0 – 6.985	6.985 – 10.795	10.795 –
Direct connection	0 – 5	5 – 7.5	7.5 –
Refrigerating machines			
Reciprocating	0 – 6.35	6.35 – 10	10 –
Centrifugal (open)	0 – 5	5 – 7.5	7.5 –
Centrifugal (hermetic)	0 – 3.81	3.81 – 5.715	5.715 –
Large trubo-generator sets: Trubo-generator sets, 3500 rpm	0 – 6.35	6.35 – 9.525	9.525 –
Large trubo-generator sets: Trubo-generator sets, 1800 rpm	0 – 4.445	4.445 – 6.985	6.985 –
Centrifugal pumps			
Vertical pumps (305–508mm high)	0 – 9.525	9.525 – 15.25	15.25 –
Vertical pumps (203–305 mm high)	0 – 8.255	8.255 – 12.7	12.7 –
Vertical pumps (127–203 mm high)	0 – 6.35	6.35 – 10	10 –
Vertical pumps (0–127 mm high)	0 – 5	5 – 7.5	7.5 –
General horizontal pumps	0 – 5	5 – 7.5	7.5 –
Boiler feed pumps	0 – 5	5 – 7.5	7.5 –
Hydraulic pumps	0 – 3.175	3.175 – 5	5 –
Machine tools			
Motors/gearboxes	0 – 2.5	2.5 – 4.445	4.445 –
Gearbox input shafts	0 – 3.75	3.75 – 5.715	5.715 –
Gearbox output shafts	0 – 2.5	2.5 – 4.445	4.445 –
Spindles			
a. Rough machining	0 – 1.905	1.905 – 3.175	3.175 –
b. Finishing machining	0 – 1.25	1.25 – 1.905	1.905 –
c. Precision machining	0 – 0.76	0.76 – 1.25	1.25 –