Specification

Model	SmartVibro VM-4424S	SmartVibro VM-4424H	SmartVibro VM-3024S	SmartVibro VM-3024H	SmartVibro VM-7024
Usable 3 kinds pickups	Piezoelectric Type		Electro-dynamic Type		Piezo-resistive Type
Frequency Range	5Hz ～ 10kHz（Acceleration） 10Hz ～ 1kHz（Velocity） 10Hz ～ 150Hz（Displacement） 1kHz ～ 10kHz（Bearing） 3Hz ～ 1kHz（H-function）		10Hz ～ 1kHz（Acceleration, velocity and displacement ）		0.3Hz ～ 100Hz（Acceleration） 3Hz ～ 100Hz（Velocity and displacement）
Full Scale	Acceleration, velocity and displacement：6 Range, Automatic Switching Bearing：6 Range, Automatic Switching H-function：6 Range, Automatic Switching		Acceleration：6 Range, Automatic Switching Velocity：6 Range, Automatic Switching Displacement：6 Range, Automatic Switching		Acceleration：6 Range, Automatic Switching Velocity：6 Range, Automatic Switching Displacement：6 Range, Automatic Switching
Max. measurable range	Acceleration, H-function：300m/s²（RMS、EQP、PEAK） Velocity：1000mm/s（RMS、EQP、PEAK） Displacement：10mm（p-p）		Acceleration, H-function：100m/s²（RMS、EQP、PEAK） Velocity：200mm/s（RMS、EQP、PEAK） Displacement：1mm（p-p）		Acceleration, H-function：20m/s²（RMS、EQP、PEAK） Velocity：100mm/s（RMS、EQP、PEAK） Displacement：10mm（p-p）
Indication	PEAK：Acceleration, velocity and displacement EQP：Acceleration, velocity and displacement RMS：Acceleration, velocity		PEAK：Acceleration, velocity and displacement EQP：Acceleration, velocity and displacement RMS：Acceleration, velocity		PEAK：Acceleration, velocity and displacement EQP：Acceleration, velocity and displacement RMS：Acceleration, velocity
Accuracy ■ Frequency Response ■ Sensitivity Error ■ Range Changeover Error ■ Linearity	±5%（10Hz ～ 5kHz）±30%(5Hz ～ 10kHz) ±5%（for Full Scale value at 160Hz） ±2%（160Hz Standard） ±1%（for Full Scale value at 160Hz）		±5%（20Hz ～ 500Hz）$^{+5\%}_{-15\%}$（10Hz ～ 1000Hz） ±5%（for Full Scale value at 80Hz） ±2%（80Hz Standard） ±0.5%（for Full Scale value at 80Hz）		±5%（0.3Hz ～ 100Hz） ±5%（for Full Scale value at 16Hz） ±2%（16Hz Standard） ±1.5%（for Full Scale value at 16Hz）
Output	AC OUT：0 ～ ±1V（Load 10kΩ or higher） DC OUT：0 ～ +1V（Load 10kΩ or higher）		AC OUT：0 ～ ±1V（Load 10kΩ or higher） DC OUT：0 ～ +1V（Load 10kΩ or higher）		AC OUT：0 ～ ±1V（Load 10kΩ or higher） DC OUT：0 ～ +1V（Load 10kΩ or higher）
Display	Japanese, English（Changeover）		Japanese, English（Changeover）		Japanese, English（Changeover）
Power Source	Battery: AA ×2 pcs.（Continuous duty approx. 20 hours）		Battery: AA ×2 pcs.（Continuous duty approx. 20 hours）		Battery: AA ×2 pcs.（Continuous duty approx. 20 hours）
Size/Mass of Body Unit	74（W）×32.5（D）×148（H）mm Approx. 230g（Including Battery）		74（W）×32.5（D）×148（H）mm Approx. 230g（Including Battery）		74（W）×32.5（D）×148（H）mm Approx. 230g（Including Battery）
Size/Mass of Pickup	Piezoelectric acceleration sensor φ19×42（L）mm　40g（Pickup） φ6×185（L）mm　70g（Probe）		Electro-dynamic velocity pickup φ25.8×50（H）mm　140g（Pickup） φ8×50（L）mm　20g（Probe）		Piezo-resistive acceleration pickup 45（W）×45（D）×45（H）mm　200g（Pickup）
Corresponding Conventional Vibrometer	VM-4515・VM-4416（SI） 	—	VM-3304（SI） 	VM-3004（SI） 	VM-7000（L） 
FFT analysis	—	Δf：10Hz、5Hz、2.5Hz	—	Δf：25Hz、12.5Hz、6.25Hz	Δf：1Hz、 0.5Hz、0.25Hz
Memory	—	SD card Waveform data acquisition	—	SD card Waveform data acquisition	SD card Waveform data acquisition
Option	●Small size strong magnet MH-201R 				●magnet MB-PB 
	●Long cable  Image LC-4　(4m)		●Long cable  Image CE-3004-3　(3m) CE-3004-6　(6m) CE-3004-10（10m）		●Long cable  Image CE-7000　(10m)
	●Rubber jacket PC-3024 		●AC adapter PS-3024-3 		●Carrying case C-3024 

The screen contents, specs. or exteriors are subject to change without notice.

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SECURE THE FUTURE

SmartVibro

[VM-4424/VM-3024/VM-7024]

- Low price
- Simultaneous measurement of acceleration, velocity and displacement.
- FFT analysis*
- SD card data saving *(waveform data)

* Only for High-end model.

Vibrometer which has simultaneous measurement function of acceleration, velocity and displacement

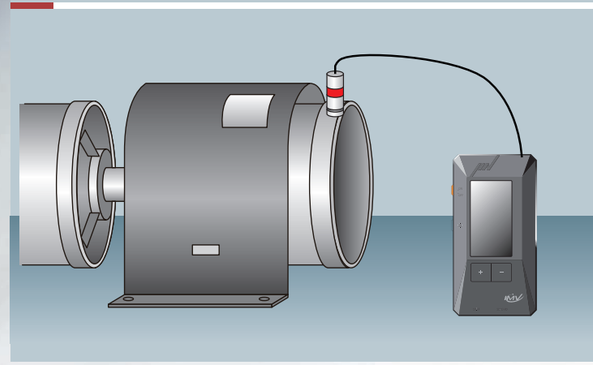
SmartVibro
[VM-4424/VM-3024/VM-7024]

Low price and high function. Downsized compact design. Acceleration, velocity and displacement indicated simultaneously on LCD Touch screen. Addition to rotating machinery such as, turbine, power generator, blower, pump or compressor, it is also suitable to vibration measurement for performance retention of utility equipments or manufacturing machines. It also can be used in routine maintenance or shipping inspection. It is also useful in a variety of purposes, such as vibration investigation of electric appliances.

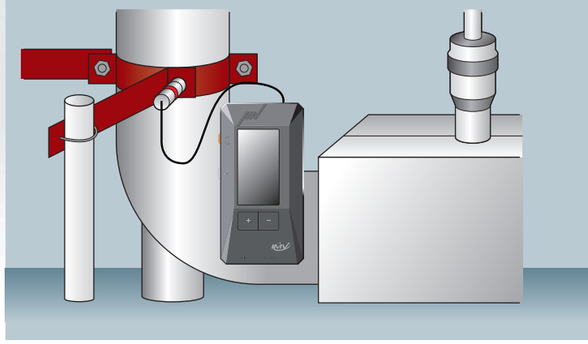
SmartVibro Function Table

Usable 3 kinds pickups / Model		Piezoelectric Type		Electro-dynamic Type		Piezo-resistive Type
		VM-4424S	VM-4424H	VM-3024S	VM-3024H	VM-7024
		Standard	High-end	Standard	High-end	High-end
Usablility	Simultaneous Measurement	○	○	○	○	○
	Waveform Data		○		○	○
	FFT analysis is necessary		○		○	○
Object	Motor, Blower, Pump	○	○	○	○	
	Turbine			○	○	
	Generator			○	○	
	Mixer, Centrifuge					○
	Crane, Bridge					○
	Floor, Ground					○

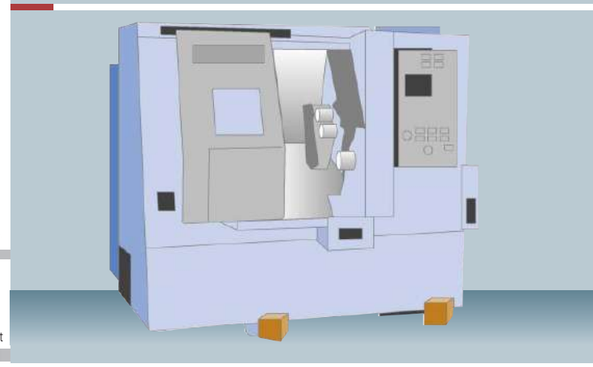
Maintenance of rotating machineries as Motors, Blowers etc.



Vibration condition check of pipe



Measurements of small displacement of machine tools

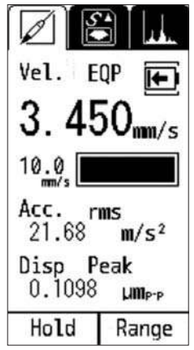


Others as routine maintenance or shipping inspection.

- Maintenance check of petrol pump, feed pump or mixer.
- Monitoring of Pipe, feed pump, motor or mill bearing.

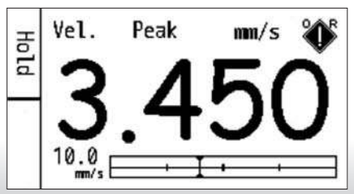
Simultaneous Measurement

Support of quick and easy measurements



There are many functions to express characteristics of vibration. However it is necessary for the conventional vibrometers that the same point is measured plural times switching objective functions one by one. SmartVibro which has a simultaneous measurement function can measure Acceleration, Velocity and Displacement simultaneously by just pressing the measurement start key one time. It can reduce the operating time and prevent miss-measurements. By switching the screen, VM-4424S・VM4424H can confirm Acceleration Envelope for bearing condition which enables small scars to be found easily.

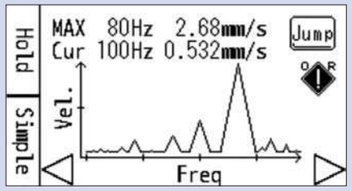
High functional LCD



◀OA screen
(Display of velocity value)

FFT Analysis function * Only for High-end model.

For investigation of cause of vibration



◀FFT Analysis screen

If the measured magnitude of vibration is too large, cause investigation by FFT is recommended.

SmartVibro is possible to perform Frequency Analysis by the minimum condition setting.

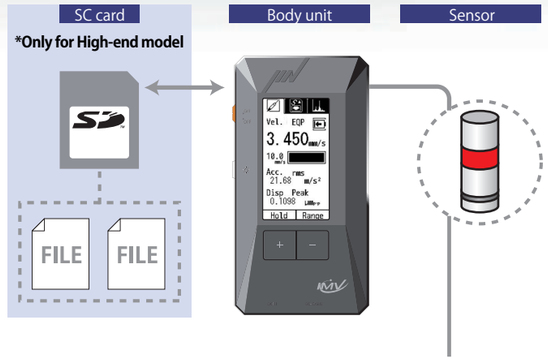
SD card data saving * Only for High-end model.

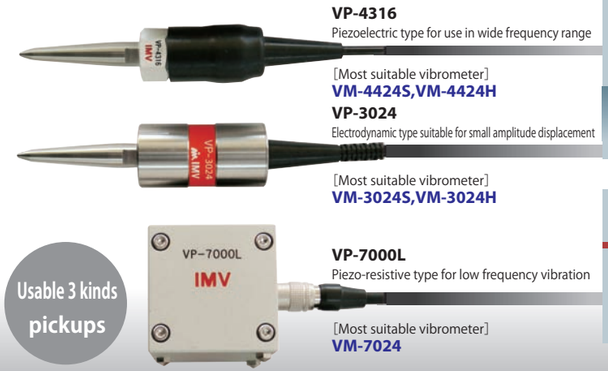
Crucial data saving function for recording and maintenance.

Waveform data saving is possible in data saving mode.
Waveform data saved in SC card can be transferred to P.C.

[SD card]
Memory capacity 2GB. About 1000 files can be saved
(1 file data for 5 seconds).

System Composition





VP-4316
Piezoelectric type for use in wide frequency range
[Most suitable vibrometer]
VM-4424S,VM-4424H

VP-3024
Electrodynamic type suitable for small amplitude displacement
[Most suitable vibrometer]
VM-3024S,VM-3024H

Usable 3 kinds pickups

VP-7000L
Piezo-resistive type for low frequency vibration
[Most suitable vibrometer]
VM-7024