

Related Products

Check the performance characteristics of floor surface materials

Tapping Machine Light Floor Impact Sound Generator

FI-01



- Light and hard impact source imitating walking with shoes, designed for on-site use in measuring impact sound levels of flooring
- Allows checking insulation performance of floor surface materials mainly in medium and high frequency range

JIS A 1418-1: 2000 Standard Light Impact Sound Source

Specifications

Applicable standard	JIS A 1418-1
Impact cycle	100 ±5 ms
Hammers	Cylindrical, linear arrangement of 5 hammers spaced 10 cm apart
Hammer material	Stainless steel
Power	100 V AC (50/60 Hz), approx. 80 VA
Dimensions, Weight	Approx. 260 (H) x 520 (W) x 260 (D) mm, approx. 17.5 kg

For testing the acoustic properties of floor construction

Heavy Floor Impact Source

FI-02



- Heavy and soft impact source suitable for floor impact sound level measurement, simulating events such as children jumping up and down
- Can be used to evaluate mainly the medium and low frequency range insulation aspect in the acoustic performance of floor structures

JIS A 1418-2: 2000 Standard Heavy Impact Source (impact force characteristics 1)

Octave band impact force exposure level and tolerance values for impact force characteristics 1

Octave band center frequency Hz	Octave band impact force exposure level dB	Tolerance dB
31.5	47.0	±1.0
63	40.0	±1.5
125	22.0	±1.5
250	11.5	±2.0
500	5.5	±2.0

For sound insulation testing of floors in buildings

Impact Ball

YI-01



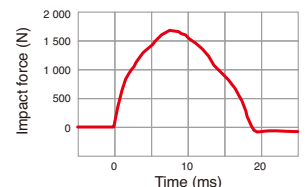
- Designed for sound insulation testing in lightweight structures where a standard heavy impact sound source (bang machine) with characteristics (1) would create too much impact force
- By performing a free drop from a height of 1 meter, a stable impact force of about 1 500 N (Newton) can be created
- Light mass of 2.5 kg allows for easy carrying

JIS A 1418-2: 2000 Standard Heavy Impact Sound Source, (impact Characteristics 2)

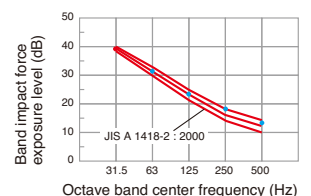
Specifications

Equivalent mass	2.5 ±0.1 kg
Drop height	1 m
Major rubber compound	Silicone rubber
Shape	Hollow sphere with 32 mm thick wall and 178 mm external diameter
Rebound coefficient	0.8 ±0.1

Impact force waveform (example)



Impact force exposure level frequency characteristics



Related Products

Sound source for all kinds of acoustic measurements

Random Noise Generator SF-06



- Generates white noise and pink noise and uses a 1/1 octave filter to produce band noise
- White noise and pink noise covers the 20 Hz to 20 kHz frequency range, and octave band noise uses center frequencies from 31.5 Hz to 8 kHz
- Applications include architectural acoustic measurements, sound absorption factor measurements in anechoic chambers, and sound insulation measurements

Specifications

Output frequency range	White noise, Pink noise (bandwidth 20 Hz to 20 kHz) Octave band noise
Output signal level	Approx. 1.0 Vrms
Output level range	0 dB to -60 dB
Octave bands	31.5 Hz to 8 kHz
Power	90 to 250 V AC (50/60 Hz), approx. 20 VA
Dimensions, Weight	168(H)×198(W)×270(D)mm, approx. 3 kg

※Contact RION distributors for recommendations on suitable power amplifiers and speakers.

Easily measure the viscosity of fluids

Viscotester VT-03F/04F



- Suitable for viscosity measurements of industrial substances such as heavy oil, paint, and adhesives, as well as for quality control in manufacturing processes of foodstuffs and other products
- Operates using the rotating cylinder principle, where a rotor turning at constant speed is inserted into the liquid to be measured. The resistance to rotor movement caused by the viscosity (torque) is measured using a special mechanism to obtain direct readings in millipascal-seconds (mPa.s) or decipascal-seconds (dPa.s).

Specifications

Model	VT-03F (for low viscosity measurement)	VT-04F (for high viscosity measurement)
Measurement range	2 mPa.s to 300 mPa.s	0.3 dPa.s to 4 000 dPa.s
Sample fluid capacity	Approx. 460 mL (using supplied cup A or Cup B)	No.1 or No. 2 rotor Approx. 350 mL (using JIS compliant 300 mL beaker) No. 3 rotor Approx. 170 mL (using No.3 cup) Lower rotor edge lifted about 15 mm from bottom of cup
Measurement accuracy	Within ±5 % of scale maximum	Within ±10 % of scale maximum, reproducibility ±5 %
Power	IEC R6 (size AA) batteries, AC adapter (VA-05A/B, option)	
Dimensions, Weight	181 (H) × 98 (W) × 40 (D) mm (not including protruding parts), approx. 570 g (not including batteries)	

Options

Stand	VA-04
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Carefully controlled acoustic properties provide a stable and quiet environment for measurements

Anechoic Box (Compact Type) RKB Series



- Suitable for use in testing and developing small size precision instruments
- Wall reflections are damped for enhanced measurement accuracy
- Wedge-shaped absorber layer provides high sound absorption efficiency
- Compact dimensions and casters provide mobility
- Available as standard Type L, or Type H with higher sound insulation and absorption characteristics

Sound insulation performance (Type L)

● Measured according to JIS A 1417. Results may differ slightly, depending on construction of installation location (floor, walls, ceiling) and ambient noise level.

Frequency	(63 Hz)	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
Sound insulation	10 dB	15 dB	23 dB	30 dB	35 dB	40 dB	40 dB

*Deviation -3 dB or more *Figures in brackets are reference values

Dimensions, Weight (Type L)

Model	External dimensions	Internal dimensions	Weight
RKB-11L	960 (H) × 930 (W) × 730 (D) mm	500 (H) × 600 (W) × 400 (D) mm	90 kg
RKB-22L	1170 (H) × 1130 (W) × 930 (D) mm	700 (H) × 800 (W) × 600 (D) mm	130 kg
RKB-33L	1380 (H) × 1330 (W) × 1130 (D) mm	900 (H) × 1000 (W) × 800 (D) mm	185 kg

Anechoic Room RKA Series



- Can be assembled on site in existing buildings, which helps to keep costs low
- Enhanced sound insulation performance and additional facilities available as options
- Available as standard Type L, or Type H with higher sound insulation and absorption characteristics

Sound insulation performance (Type L/Type H)

● Measured according to JIS A 1417. Results may differ slightly, depending on construction of installation location (floor, walls, ceiling) and ambient noise level.

Frequency	(63 Hz)	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
Sound insulation	32 dB	40 dB	42 dB	53 dB	56 dB	62 dB	64 dB

*Deviation -3 dB or more *Figures in brackets are reference values

Dimensions, Weight (Type L)

Model	External dimensions	Internal dimensions	Weight
RKA-11L	2 835 (H) × 2 750 (W) × 1 950 (D) mm	2 000 (H) × 2 000 (W) × 1 200 (D) mm	2 500 kg
RKA-22L	2 835 (H) × 3 550 (W) × 2 750 (D) mm	2 000 (H) × 2 800 (W) × 2 000 (D) mm	3 500 kg
RKA-33L	2 835 (H) × 4 350 (W) × 3 550 (D) mm	2 000 (H) × 3 600 (W) × 2 800 (D) mm	4 700 kg

Sound Proof Chamber RKC Series



- Can be assembled on site in a short time
- Suitable for many applications, including acoustic measurements of small machinery and equipment, sound-shielded environment configuration, acoustic testing, hearing level testing and more
- Enhanced sound insulation performance and additional facilities available as options

Sound insulation performance

● Measured according to JIS A 1417. Results may differ slightly, depending on construction of installation location (floor, walls, ceiling) and ambient noise level.

Frequency	(63 Hz)	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
Sound insulation	25 dB	38 dB	38 dB	50 dB	53 dB	56 dB	59 dB

*Deviation -3 dB or more *Figures in brackets are reference values

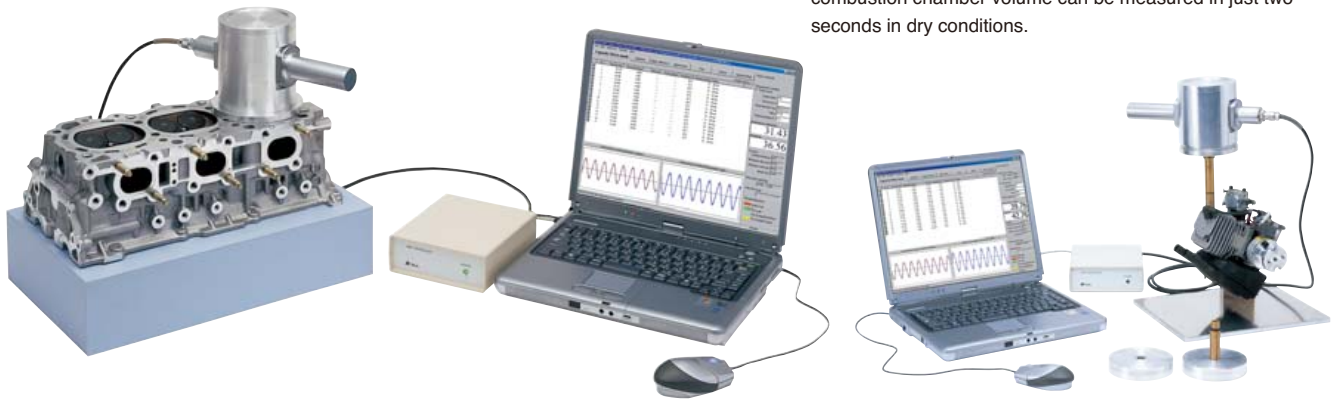
Dimensions, Weight

Model	External dimensions	Internal dimensions	Weight
RKC-71	2 410 (H) × 2 080 (W) × 2 080 (D) mm	1 925 (H) × 1 830 (W) × 1 830 (D) mm	900 kg
RKC-81	2 410 (H) × 3 075 (W) × 2 080 (D) mm	1 925 (H) × 2 825 (W) × 1 830 (D) mm	1 200 kg

Perform precise measurements in air for any shape object

Acoustical Volume Meter

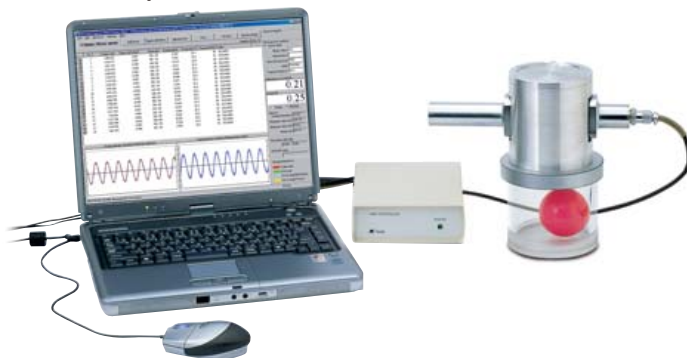
(For combustion chamber volume measurement)



- Regardless of the shape, the combustion chamber volume can be measured by simply placing the volume meter on the combustion chamber cavity of the cylinder head, as shown in the picture.
- Instead of using a spark plug of the assembled engine, special adapters are used to connect to the volume meter so that the combustion chamber volume can be measured.
- In the process of engine manufacturing or maintenance, the combustion chamber volume can be measured in just two seconds in dry conditions.

Acoustical Volume Meter

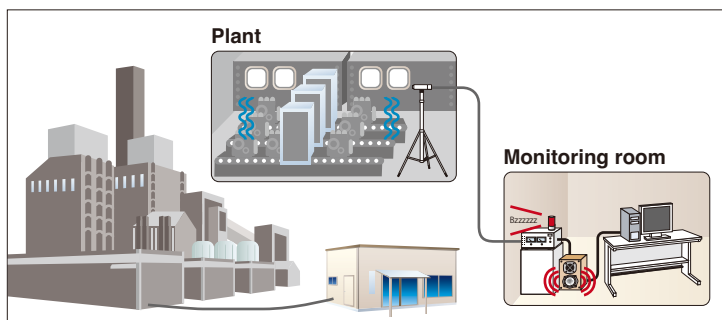
(Densimeter)



- Unlike the conventional method of the Archimedes principle (where the target object is immersed in water), this system allows volume measurement of the target object in dry conditions.
- Even the volume of objects with complex shape can be measured accurately in a short time (approx. two seconds).
- In combination with an electronic precision balance, the volume and density can be measured quickly.

For noise measurement and monitoring at large-scale facilities such as industrial plants and power stations

Remote Noise Monitoring System



Example for Remote Noise Monitoring System setup

- Monitor noise levels in a plant or similar from a remote location
- Set noise thresholds and limit values for triggering audible or visual alarms
- Single measurement range covering 100 dB eliminates the need for range switching
- Alarm level can be set to any value within the measurement range
- Alarm response delay time can be set (alarm is triggered after noise has continuously exceeded threshold level for this interval)
- Relay contacts for operation of external equipment
- Integrated power amplifier allows monitoring of noise at measurement point

Other Products

- Oblique incident sound absorption coefficient measurement system
- Multi-channel selector
- PWL measurement microphone tool
- Parabola type sound collector MY-11
- Omnidirectional sound-source SS-05T

Besides the products described in this catalog, RION Co., Ltd. also has experience with systems such as listed at left. We also build custom-designed measurement systems to order.