Specifications

;	System Model		m030/MA1-CE	m060/MA1-CE	m120/MA1-CE	m130LS/MA1-CE	m030H/MA1 (High frequency)
Image		е	φ190	9230 281	φ320	592	φ190 275
	Frequen	cy Range (Hz)	0 - 3000	0 - 3000	0 - 2000	2 - 1000	1000 - 10000
		Sine(N)	300	600	1200	1300	380
System	Rated force	Random (N rms)	210	420	840	650	266
		Shock (N)	300	600	1200	1300	380
		No load (m/s²)	500	500	500	130	200
	Maximum	0.5 kg load (m/s²)	272	352	413	123	158
Specifications	Acc.	1.0 kg load (m/s²)	187	272	352	118	131
	Maximum Velocity (m/s)		1.6	1.6	1.6	1.0	_ *1
	Maximum Displacement (mmp-p)		26	30	30	51	— *1
	Maximum Load (kg)		15	15	120	100	15
	Power Requirements (kVA)*2		0.4	0.7	1.1	1.1	0.5
			m030-CE	m060-CE	m120-CE	m130LS-CE	
	Armatur	e Support Method	Diaphragm spring	Diaphragm spring	Air Suspension	Air Suspension	Rubber spring
Vibration	Armatur	e Mass (kg)	0.6	1.2	2.4	10	1.9
Generator	Armatur	e Diameter (φmm)	114	114	174	φ180	65
	Dimensi	ons (mm)	φ190 x H240	φ230 x H281	φ320 x H327*3	W410 x H592 x D460	φ190 x H275
	Mass (kg	g)	22	40	110	250	30
			MA1-CE	MA1-CE	MA1-CE	MA1-CE	MA1-CE
	Maximu	m Output (kVA)	1.0	1.0	1.0	1.0	1.0
Power	Dimensi	ons (mm) W x H x D	430 x 149 x 430				
Amplifier	Mass (kg	g)	25	25	25	25	25
	Cooling	Method	Air cooling				
Cooling	Blower		Housed in vibration generator				



IMV CORPORATION



M-series

Silent model ideal for abnormal noise inspection

Compact BSR Vibration test systems

Compact and silent, Feature 01 but also powerful enough for full-scale tests

Feature 02 Can be installed anywhere with AC100V

Feature 03 Silent design with a built-in cooling fan



	For Light test samples	For Heavy test samples	For Transportation tests	For High-frequency tests
Frequency range	0 - 3000 Hz	0 - 2000 Hz	2 - 1000 Hz	1000 - 10000 Hz
Maximum load	15 kg	120 kg	100 kg	15 kg
Applicable model	> m030 > m060	⊘ m120	> m130LS	> m030H

IMV CORPORATION

^{*1} The displacement at the lower limit of frequency (1000 Hz) and maximum acceleration (200 m/s²) is so small that there is no certified value.

*2 Power supply: single-phase AC100 V/200 V or AC110 V/220 V or AC120 V/240 V ±10% 50/60 Hz. A transformer is required for other supply voltages.

*3 Insulation pad (W410 x H45 x D410 mm) is standard equipment.

*The specifications show maximum system performance. For long-duration tests, system must be de-rated up to 70%. Continuous use at maximum levels may cause failure. Please contact IMV if your system operates at more than 70%..

*Frequency range values vary according to sensor and vibration controller.

https://www.imv-global.com/

^{*}The specifications and design are subject to change without notice.

M030/MA1-CE

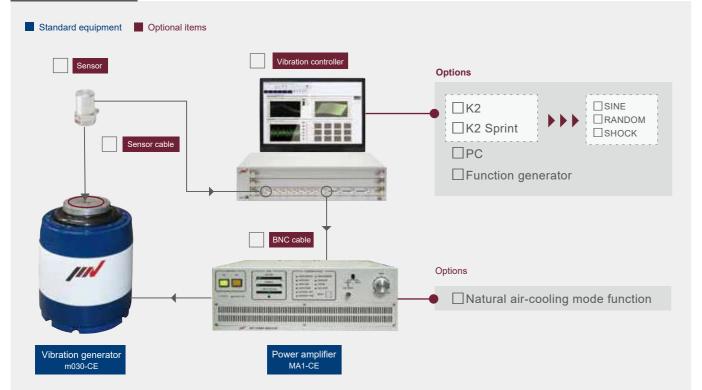
Compact and silent, but also powerful enough for full-scale tests.



	System Model		m030/MA1-CE		Model	m030-CE
	Frequency Range (Hz)		0 – 3000		Armature Support Method	Diaphragm spring
		Sine (N)	300	Vibration Generator	Armature Mass (kg)	0.6
	Rated force	Random (N rms)	210		Armature Diameter (φmm)	114
		Shock (N)	300		Dimensions (mm)	φ190 x H240
		No load (m/s²)	500		Mass (kg)	22
System Specifications	Maximum Acc.	0.5 kg load (m/s²)	272		Model	MA1-CE
oposinoausi is		1.0 kg load (m/s²)	187		Maximum Output (kVA)	1.0
	Maximum Velocity (m/s)		1.6	Power Amplifier	Dimensions (mm) W x H x D	430 x 149 x 430
	Maximur	m Displacement(mmp-p)	26	Ampliner	Mass (kg)	25
	Maximu	ım Load (kg)	15		Cooling Method	Air cooling
	Power Requirements (kVA)*1		0.4	Cooling	Blower	Housed in vibration generator

^{*}¹ Power supply: single-phase AC100 V/200 V or AC110 V/220 V or AC120 V/240 V ±10% 50/60 Hz. A transformer is required for other supply voltages.
*The specifications show maximum system performance. For long-duration tests, system must be de-rated up to 70%.
Continuous use at maximum levels may cause failure. Please contact IMV if your system operates at more than 70%.
*Frequency range values vary according to sensor and vibration controller.

System composition



Head expander compatible with m030

Use a head expander for test samples that are too large to put on the table. The test sample mass must fall within the load limit of the shaker (15 kg) minus the head expander mass. When using the head expander, the upper limit frequency is smaller than when using the test system alone.

Model	Dimensions (mm)	Mass (kg)		Material
TBV-125-m30-A	125 × 125 × t 20	0.9	2000	Aluminum alloy
TBV-200-m30-A-G*	200 × 200 × t 20	2.7	1500	Aluminum alloy
TBV-200-m30-M-G*	200 × 200 × t 20	1.9	1500	Magnesium alloy

^{*}A supplementary guidance system with linear bearings is used with the vibration generator when combined with the head expander.

Armature mass is increased due to the addition of the guide support.



Slip table compatible with m030

Use a slip table for test samples that are too large to put on the table. The test sample mass must fall within the load limit of the shaker (15 kg) minus the head expander mass. When using the head expander, the upper limit frequency is smaller than when using the test system alone.

Model	Dimensions (mm)	Mass (kg)		Material	
TBH-200-m30-A-MB	200 × 200 × t 20	4.0	500	Aluminum alloy	
TBH-315-m30-A-MB	315 × 315 × t 20	7.5	500	Aluminum alloy	



Cubic fixture compatible with m030

Use when mounting directly on a vibration generator and performing vibration in 3 axes (X, Y, and Z).

Two types of cubic fixture are available. Type A has mounting holes on each face and type B has specimen mounting plates which attach to the cubic frame.

Model	Dimensions (mm)	Mass (kg)		Material
TCJ-A150-m30-A	150 × 150 × 150	5.5	2000	Aluminum alloy
TCJ-A150-m30-M	150 × 150 × 150	4.0	2000	Magnesium alloy
TCJ-A160-m30-A	160 × 160 × 160	6.5	2000	Aluminum alloy
TCJ-A160-m30-M	160 × 160 × 160	4.6	2000	Magnesium alloy
TCJ-B150-m30-A	150 × 150 × 150	3.5	2000	Aluminum alloy
TCJ-B150-m30-M	150 × 150 × 150	2.5	2000	Magnesium alloy
TCJ-B160-m30-A	160 × 160 × 160	4.0	2000	Aluminum alloy
TCJ-B160-m30-M	160 × 160 × 160	2.8	2000	Magnesium alloy



☐ Soundproof enclosure

Acoustic noise testing is made possible by placing the shaker in a soundproof box.



Excitation at any selected point

Modal analysis can be done by applying vibration to the car body, etc.



Emergency stop switch

It is possible to stop the system in an emergency.



Trunnion Base

It is possible to use the vibration generator horizontally.



M060/MA1-CE

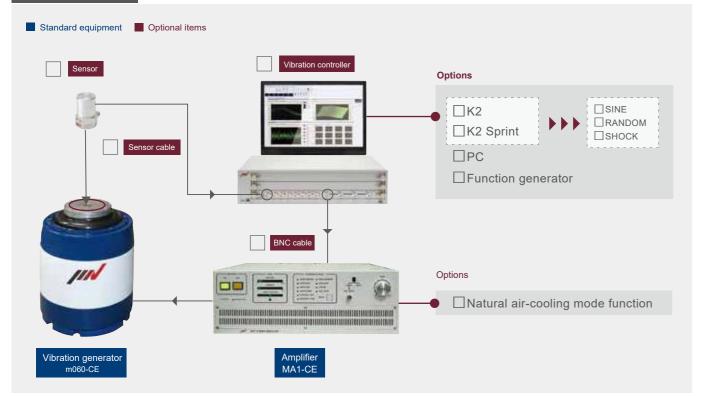
Compact and silent, but also powerful enough for full-scale tests.



Systo	m Modol	m060/MA1.CE		Model	m060-CE
Syste	III Model	MU00/MAI-CE		Model	MU00-CE
Frequency Range (Hz)		0 – 3000		Armature Support Method	Diaphragm spring
	Sine (N)	600	Vibration Generator	Armature Mass (kg)	1.2
Rated force	Random (N rms)	420		Armature Diameter (φmm)	114
	Shock (N)	600		Dimensions (mm)	φ230 x H281
	No load (m/s²)	500		Mass (kg)	40
Maximum Acc.	0.5 kg load (m/s²)	352		Model	MA1-CE
	1.0 kg load (m/s²)	272		Maximum Output (kVA)	1.0
Maximu	um Velocity (m/s)	1.6		Dimensions (mm) W x H x D	430 x 149 x 430
Maximur	m Displacement(mmp-p)	30	Ampliner	Mass (kg)	25
Maximu	um Load (kg)	15		Cooling Method	Air cooling
Power	Requirements (kVA)*1	0.7	Cooling	Blower	Housed in vibration generator
	Rated force Maximum Acc. Maximum Maximum Maximum Maximum	Rated Random (N ms) Shock (N) No load (m/s²) 0.5 kg load (m/s²)	Frequency Range (Hz)	Sine (N) 600 Vibration Generator	Frequency Range (Hz) 0 - 3000 Armature Support Method

^{*1} Power supply: single-phase AC100 V/200 V or AC110 V/220 V or AC120 V/240 V ±10% 50/60 Hz. A transformer is n *The specifications show maximum system performance. For long-duration tests, system must be de-rated up to 70%. Continuous use at maximum levels may cause failure. Please contact IMV if your system operates at more than 70%. *Frequency range values vary according to sensor and vibration controller.

System composition



Head expander compatible with m060

Use a head expander for test samples that are too large to put on the table. The test sample mass must fall within the load limit of the shaker (15 kg) minus the head expander mass. When using the head expander, the upper limit frequency is smaller than when using the test system alone.

Model	Dimensions (mm)	Mass(kg)		Material
TBV-125-m60-A	125 × 125 × t 20	0.9	2000	Aluminum alloy
TBV-200-m60-A	200 × 200 × t 20	2.5	1500	Aluminum alloy
TBV-200-m60-M	200 × 200 × t 20	1.7	1500	Magnesium alloy
TBV-315-m60-A-G*	315 × 315 × t 30	8.8	1000	Aluminum alloy
TBV-315-m60-M-G*	315 × 315 × t 30	6.1	1000	Magnesium alloy

^{*}A supplementary guidance system with linear bearings is used with the vibration generator when combined with the head expander.

Armature mass is increased due to the addition of the guide support.



Slip table compatible with m060

Use a slip table for test samples that are too large to put on the table. The test sample mass must fall within the load limit of the shaker (15 kg) minus the head expander mass. When using the head expander, the upper limit frequency is smaller than when using the test system alone.

	Model	Dimensions (mm)	Mass(kg)		Material
	TBH-200-m60-A-MB	200 × 200 × t 20	4.0	500	Aluminum alloy
	TBH-315-m60-A-MB	315 × 315 × t 20	7.5	500	Aluminum alloy
	TBH-400-m60-A-MB	400 × 400 × t 20	12.3	500	Aluminum alloy



Cubic fixture compatible with m060

Use when mounting directly on a vibration generator and performing vibration in 3 axes (X, Y, and Z).

Two types of cubic fixture are available. Type A has mounting holes on each face and type B has specimen mounting plates which attach to the cubic frame.

Model	Dimensions (mm)	Mass(kg)		Material
TCJ-A150-m60-A	150 × 150 × 150	5.5	2000	Aluminum alloy
TCJ-A150-m60-M	150 × 150 × 150	4.0	2000	Magnesium alloy
TCJ-A160-m60-A	160 × 160 × 160	6.5	2000	Aluminum alloy
TCJ-A160-m60-M	160 × 160 × 160	4.6	2000	Magnesium alloy
TCJ-B150-m60-A	150 × 150 × 150	3.5	2000	Aluminum alloy
TCJ-B150-m60-M	150 × 150 × 150	2.5	2000	Magnesium alloy
TCJ-B160-m60-A	160 × 160 × 160	4.0	2000	Aluminum alloy
TCJ-B160-m60-M	160 × 160 × 160	2.8	2000	Magnesium alloy



☐ Soundproof enclosure

Acoustic noise testing is made possible by placing the shaker in a soundproof box.



Excitation at any selected point

Modal analysis can be done by applying vibration to the car body, etc.



Emergency stop switch

It is possible to stop the system in an emergency.



Trunnion Base

It is possible to use the vibration generator horizontally.



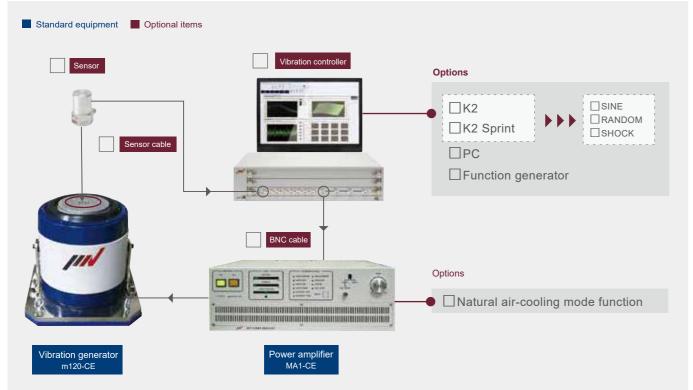
M120/MA1-CE

Compact and silent, but also powerful enough for full-scale tests.



			m Model	m120/MA1-CE		Model	m120-CE
		Freque	ncy Range (Hz)	0 - 2000		Armature Support Method	Air suspension
			Sine (N)	1200	Vibration	Armature Mass (kg)	2.4
		Rated force	Random (N rms)	840	Generator	Armature Diameter (φmm)	174
			Shock (N)	1200		Dimensions (mm)	φ320 x H327*2
			No load (m/s²)	500		Mass (kg)	110
	System Specifications		0.5 kg load (m/s²)	413		Model	MA1-CE
			1.0 kg load (m/s²)	352	Power Amplifier	Maximum Output (kVA)	1.0
			um Velocity (m/s)	1.6		Dimensions (mm) W x H x D	430 x 149 x 430
n		Maximur	m Displacement(mmp-p)	30	Ampliner	Mass (kg)	25
		Maximu	um Load (kg)	120		Cooling Method	Air cooling
		Power	Requirements (kVA)*1	1.1	Cooling	Blower	Housed in vibration generator
	*2 Insulation pad (*The specification Continuous use a	Power supply: single-phase AC100 V/200 V or AC ² Insulation pad (W410 x H45 x D410 mm) is standa The specifications show maximum system performation continuous use at maximum levels may cause failur Frequency range values vary according to sensor ar		rd equipment. nce. For long-duration tests e. Please contact IMV if you	s, system must be	de-rated up to 70%.	er supply voltages.

System composition



Head expander compatible with m120

Use a head expander for test samples that are too large to put on the table. The test sample mass must fall within the load limit of the shaker (120 kg) minus the head expander mass. When using the head expander, the upper limit frequency is smaller than when using the test system alone.

Model	Dimensions (mm)	Mass(kg)		Material
TBV-200-m120-A	200 × 200 × t 20	2.5	1500	Aluminum alloy
TBV-200-m120-M	200 × 200 × t 20	1.7	1500	Magnesium alloy
TBV-315-m120-A	315 × 315 × t 35	9.0	1000	Aluminum alloy
TBV-315-m120-M	315 × 315 × t 35	6.2	1000	Magnesium alloy
TBV-400-m120-A-G*	400 × 400 × t 35	15	600	Aluminum alloy
TBV-400-m120-M-G*	400 × 400 × t 35	10.4	600	Magnesium alloy

when combined with the head expander.

Armature mass is increased due to the addition of the guide support.



Slip table compatible with m120

Use a slip table for test samples that are too large to put on the table. The test sample mass must fall within the load limit of the shaker (120 kg) minus the head expander mass. When using the head expander, the upper limit frequency is smaller than when using the test system alone.

Model	Dimensions (mm)	Mass(kg)		Material
TBH-200-m120-A-MB	200 × 200 × t 20	5.5	500	Aluminum alloy
TBH-315-m120-A-MB	315 × 315 × t 20	9.0	500	Aluminum alloy
TBH-400-m120-A-MB	400 × 400 × t 20	14.0	500	Aluminum alloy



Cubic fixture compatible with m120

Use when mounting directly on a vibration generator and performing vibration in 3 axes (X, Y, and Z).

Two types of cubic fixture are available. Type A has mounting holes on each face and type B has specimen mounting plates which attach to the cubic frame.

Model	Dimensions (mm)	Mass(kg)		Material
TCJ-A150-m120-A	150 × 150 × 150	5.5	2000	Aluminum alloy
TCJ-A150-m120-M	150 × 150 × 150	4.0	2000	Magnesium alloy
TCJ-A160-m120-A	160 × 160 × 160	6.5	2000	Aluminum alloy
TCJ-A160-m120-M	160 × 160 × 160	4.6	2000	Magnesium alloy
TCJ-B150-m120-A	150 × 150 × 150	3.5	2000	Aluminum alloy
TCJ-B150-m120-M	150 × 150 × 150	2.5	2000	Magnesium alloy
TCJ-B160-m120-A	160 × 160 × 160	4.0	2000	Aluminum alloy
TCJ-B160-m120-M	160 × 160 × 160	2.8	2000	Magnesium alloy



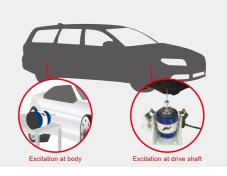
☐ Soundproof enclosure

Acoustic noise testing is made possible by placing the shaker in a soundproof box.



Excitation at any selected point

Modal analysis can be done by applying vibration to the car body, etc.



Emergency stop switch

It is possible to stop the system in an emergency.



Trunnion Base

It is possible to use the vibration generator horizontally.



M130LS/MA1-CE

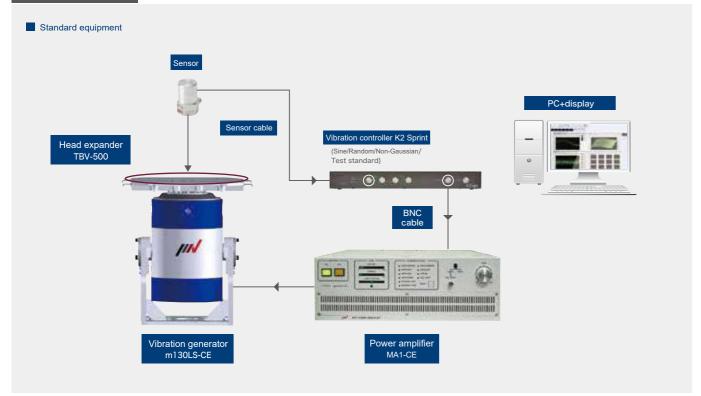
Ideal for transport vibration tests for maximum 100 kg, 120 size class packages.



		System Model		m130LS/MA1-CE		Model	m130LS-CE
		Frequency Range (Hz)		2 - 1000		Armature Support Method	Air suspension
		Rated force	Sine (N)	1300	Vibration Generator	Armature Mass (kg)	10
			Random (N rms)	650		Armature Diameter (φmm)	180
			Shock (N)	1300		Dimensions (mm)	W410 x H592 x D460
		Maximum Acc.	No load (m/s²)	130		Mass (kg)	250
n	System Specifications		0.5 kg load (m/s²)	123		Model	MA1-CE
			1.0 kg load (m/s²)	118		Maximum Output (kVA)	1.0
		Maximum Velocity (m/s) Maximum Displacement(mmp-p)		1.0	Power Amplifier	Dimensions (mm) W x H x D	430 x 149 x 430
				51		Mass (kg)	25
		Maximum Load (kg)		100		Cooling Method	Air cooling
		Power	Requirements (kVA)*1	1.1	Cooling	Blower	Housed in vibration generator
	The state of the s						

^{**}I Power supply: single-phase AC100 V/200 V or AC110 V/220 V or AC120 V/240 V ±10% 50/60 Hz. A transformer is required for other supply voltages.
*The specifications show maximum system performance. For long-duration tests, system must be de-rated up to 70%.
Continuous use at maximum levels may cause failure. Please contact IMV if your system operates at more than 70%.
*Frequency range values vary according to sensor and vibration controller.

System composition



Head expander compatible with m130LS

Use a head expander for test samples that are too large to put on the table. The test sample mass must fall within the load limit of the shaker (100 kg) minus the head expander mass. When using the head expander, the upper limit frequency is smaller than when using the test system alone.

Model	Dimensions (mm)	Mass (kg)		Material
TBV-500-m130LS-A	500 × 500 × t 45	15	500	Aluminum alloy



Slip table compatible with m130LS

Use a slip table for test samples that are too large to put on the table. The test sample mass must fall within the load limit of the shaker (100 kg) minus the head expander mass. When using the head expander, the upper limit frequency is smaller than when using the test system alone.

Model	Dimensions (mm)	Mass (kg)		Material
TBH-500-m130LS-A-MB	500 × 500 × t 20	28	500	Aluminum alloy



Emergency stop switch

It is possible to stop the system in an emergency.

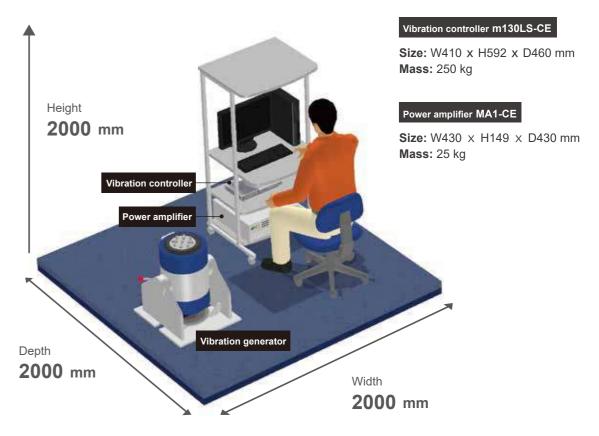


Test standards

A test file will be automatically generated upon selection of the test conditions defined by the test standards.



m130LS layout image



^{*}This is the recommended layout.

^{*}Layout can be changed depending on the characteristics of the installation location.

M030H/MA1

Supports high frequencies (up to 10,000 Hz)

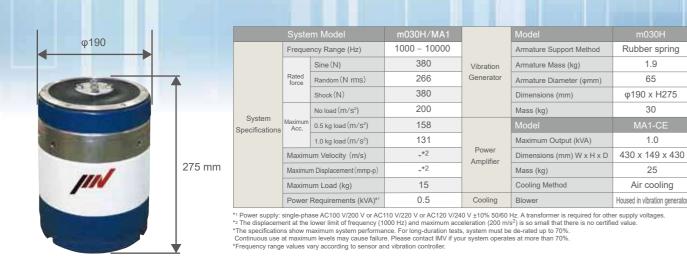
1.9

65

30

1.0

25



System composition Standard equipment Optional items Options SINE RANDOM ☐ K2 Sprint SHOCK Sensor cable □РС ☐ Function generator ■ Natural air-cooling mode function Power amplifier MA1-CE



Sample test products that can be tested with the m-series



Test cases using the m-series

Electronic parts

Vibration tests can be done on small electronic components such as connectors, capacitors, sensors, resistors, and LEDs.



Fatigue testing of copper plating

A custom system developed using a compact m-series shaker for fatigue testing copper plating. Up to 12 sheets of copper plating can be tested simultaneously using this system.



Seismic evaluation tests

Complete systems are available for the reproduction and study of seismic events.





Transportation tests

Transportation tests can be done on small and packaged products. (Compatible with various test standards including JIS, IEC, MIL, and ASTM.)





Automotive tests

A vibration system can be set up to move along guide rails.

The system can be combined with other types of test equipment, including temperature chambers, if necessary.





Automotive tests

Simulation testing using actual measured data or more traditional random testing can be done in simultaneous 3-axis. When the shaker system is combined with a half-anechoic chamber, 3D squeak-and-rattle testing can be done in an environment with a background noise level of less than 30 dB.





Automotive tests

Function and durability tests can be done on parts exposed to rapid temperature changes.





Automotive tests

A 6-DOF vibration test system with 8 compact, silent shakers for squeak-and-rattle acoustic noise evaluation of instrument panels.



Videos



IMV's compact transport vibration test system, ideal for conducting a wide variety of transport tests, can be operated easily by anyone.



12

11