IMV VIBRATION TEST SYSTEMS

m series

Low Acoustic Noise and Compact Range Air-Cooled Vibration Test Systems

m030/MA1-CE

IMV compact shaker (m-series) applies a permanent magnet for magnet circuit and the table diameter is 190 mm. To increase the flexibility of system extension, DC Powered cooling fan is built-in to the shaker. In normal mode, it is used for durability testing with high performance. In natural air mode (without fan), it is suitable for squeak & rattle testing. System structure is specialized for high frequency test, maximum travel of armature is almost equal to 0. Displacement of double amplitude is 10 µm when excited with frequency 1 kHz and acceleration 200 $m/s^{2.}$ With the extension flexibility of IMV's m-series with high precision multi-point control has broaden the range of vibration test, long and large sized specimens such as exhaust pipe etc is possible as well.

1. Compact and Silent design

Silent type appropriate for abnormal noise inspection. DC powered cooling fan is built-into the shaker. Nature air cooling is also used when the cooling fan is stopped for silent operation. (with a reduction in performance.)

- Compact design
- Low noise (ideal for squeak and rattle testing)
- High precision measurement
- Low power consumption

2. m-series multi-axis system

A range of small-size systems, including 2-axis and 3-axis simultaneous systems, employing Integrated Cross Coupling Bearing Unit (ICCU) multi-axis armature / load support technology.

3. User first principle

Compatible with K2 vibration controller. Intuitive interface leads The operator with user-friendly guidance.

IMV CORPORATION

 Revision March 2023

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System Specification		
Frequency Range (Hz) *1		0-3,000
Rated Force	Sine (N)	300
	Random (N rms)	210
	Shock (N)	300
Maximum Acc.	No Load (m/s²)	500
	0.5 kg Load (m/s²)	272
	1.0 kg Load (m/s²)	187
Maximum Velocity (m/s)		1.6
Maximum Displacement (mmp-p)		26
Maximum Load (kg)		15
Power Requirements (kVA) *2		0.4

Vibration Generator (m030-CE)	
Armature Support Method	Diaphragm spring
Armature Mass (kg)	0.6
Armature Diameter (ϕmm)	114
Mass (kg)	22

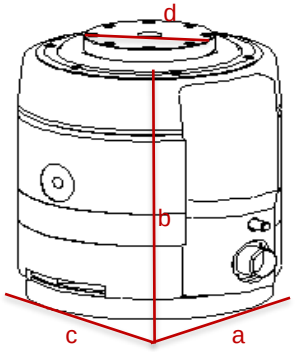
Power Amplifier (MA1-CE)	
Maximum Output (kVA) *2	1.0
Mass (kg)	25
Cooling Method	Air cooling
External Cables (m) *3	3

Cooling	
Blower	Housed in vibration generator

Environmental Data		
Power Requirement (kVA) *2		0.4
Input Voltage Supply (1ϕ, V) *2		100V or 200-240 V ±10% 50/60 Hz
Working Ambient Condition	Temperature (℃)	0-24
	Humidity (%RH)	0-85

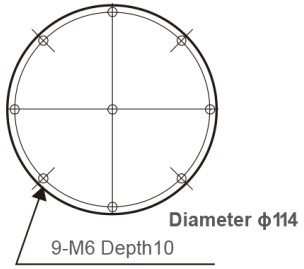
*1) Frequency range values vary according to sensor and vibration controller.
*2) Power supply: single-phase 100 V or 200-240 V, 50/60 Hz. A transformer is required for other supply voltages.
*3) Longer external cables are provided as an option.

Vibration Generator (m030-CE)



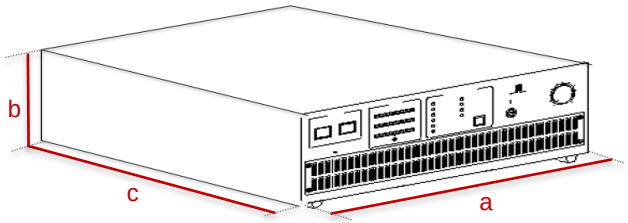
a: W190 mm
b: H 240 mm
c: D190 mm
d: 114 φmm

Table Insert Pattern (unit: mm)



m030-CE

Amplifier (MA1-CE)



a: W 430 mm
b: H 149 mm
c: D 430 mm

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