

# IMV VIBRATION TEST SYSTEMS

## m series

# m

Low Acoustic Noise  
Air Cooled Vibration Test Systems

## m120 / 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  $\mu\text{m}$  when excited with frequency 1 kHz and acceleration 200  $\text{m/s}^2$ . 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.





#### System Specifications (m120 / MA1-CE)

System Mode		Normal Mode
Frequency Range (Hz) *1		0-2000
Rated Force	Sine (N)	1200
	Random (N rms)	840
	Shock (N)	1200
Maximum Acc.	No Load (m/s <sup>2</sup> )	500
	0.5 kg Load (m/s <sup>2</sup> )	413
	1.0 kg Load (m/s <sup>2</sup> )	352
Maximum Vel.	(m/s)	1.6
Maximum Disp.	(mmp-p)	30

#### Vibration Generator (m120-CE)

Armature Support Method	Diaphragm spring
Armature Mass (kg)	2.4
Armature Diameter (φ mm)	174
Maximum Payload (kg)	120
Mass (kg)	110

\*1) Frequency range values vary according to sensor and vibration controller.

\*2) Power supply: single-phase 100V or 200-240V, 50/60Hz. A transformer is required for other supply voltages.

\*3) Longer external cables are provided as an option.

#### Cooling

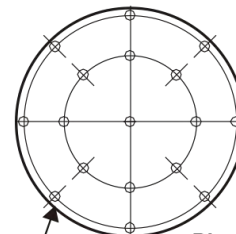
Blower	Housed in vibration generator
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#### Power Amplifier (MA1-CE)

Max. Output (kVA)	1 *2
Mass (kg)	25
Cooling Method	Air cooling
External Cables (m)	3 *3

#### Environmental Data

Power Requirement (kVA) *2	1.1	
Input Voltage Supply (1 φ, V) *2	100V or 200-240V ±10% 50/60Hz	
Working Ambient Condition	Temp. (°C)	0 - 24
	Humidity (%RH)	0 - 85



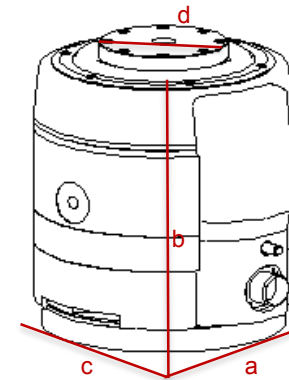
Diameter φ174

17-M6 Depth10

(P.C.D.100, 160)

**m120-CE**

unit: mm



#### Shaker

Model: m120-CE

a: W 320 mm

b: H 327 mm

c: D 320 mm

d: 174 φmm

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

#### Amplifier

Model: MA1-CE

a: W 430mm

b: H 149mm

c: D 430mm

