



IMV VIBRATION  
TEST SYSTEMS

A series

IMV-Smart™

ECO-Shaker

Air-cooled Vibration Test Systems

**A74/EM10HAG**



A series is the “new standard” in vibration testing, with a solid test performance. A series increases the relative excitation force and has a displacement of 3.0 in-p\*1, which provides a good balance within the specifications for velocity, acceleration and displacement. It also provides a maximum of 138 in/s shock velocity testing, which responds to the demand in lithium battery testing. A series supports rapid creation of tests from a set of pre-defined templates conforming to most international test standards. Simply select the standard required to generate the main test settings.  
\*1) Only for A30, A45, A65, A74



### 1. Improvement of performance

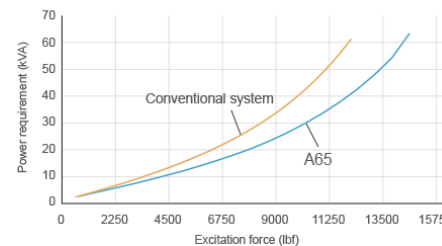
Expansion of test cases and responses to high spec. tests allow the A series to meet a wide range of testing needs.

- Improvement in excitation force
- Standard 3.0 in-p displacement
- Expansion in frequency range
- High velocity shock test

### 2. User friendly and security

Greater security and functionality with improved energy savings.

Comparison of consumed power per excitation force



### 3. User first principle

Intuitive interface guides the operator for easy use.



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System Specification		
Frequency Range (Hz)	0-2,600 <sup>4</sup>	
Rated Force	Sine (lbf)	16,700
	Random (lbf rms) <sup>*1</sup>	16,700
	Shock (lbf)	50,000
	High Velocity Shock (lbf)	38,200
Maximum Acc.	Sine (g)	102
	Random (g rms)	65
	Shock (g peak)	204
	High Velocity Shock (g peak)	204
Maximum Vel.	Sine (in/s)	79
	Shock (in/s peak)	99
	High Velocity Shock (in/s peak)	138
Maximum Disp.	Sine (in-p-p)	3.0
	High Velocity Shock (in-p-p)	3.0
Maximum Travel (in-p-p)	3.2	
Maximum Load (lbs)	2,205	
Power Requirements (kVA) <sup>*2</sup>	100	
Breaker Capacity (A) <sup>*3</sup>	175	

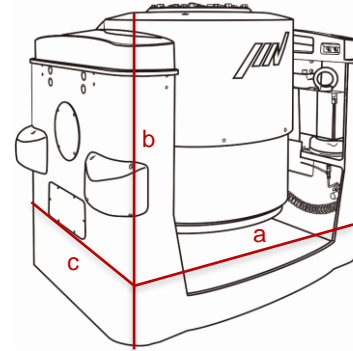
Vibration Generator (A74)	
Armature Mass (lbs)	164
Armature Diameter (φ in)	17.6
Armature Resonance (Hz)	1,770
Allowance Eccentric Moment (lbf·in)	13,700
Mass (lbs)	9,260

Power Amplifier (EM10HAG-A74)	
Maximum Output (kVA)	100
Amplifier Bay	2
Mass (lbs)	4,409

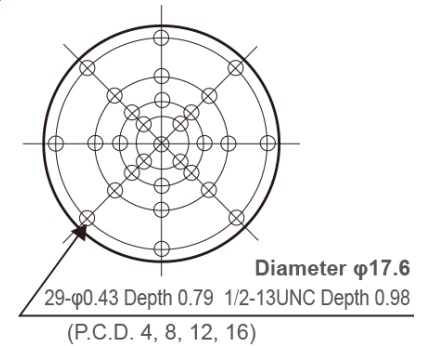
Cooling	
Mass (lbs)	705
Cooling Air Flow (cfm)	2,472

Environmental Data		
Input Voltage Supply (3 φ, V)	480	
Compressed Air Supply (psi)	102	
Working Ambient Temperature	Shaker (°F)	32-104
	Amplifier (°F)	32-104

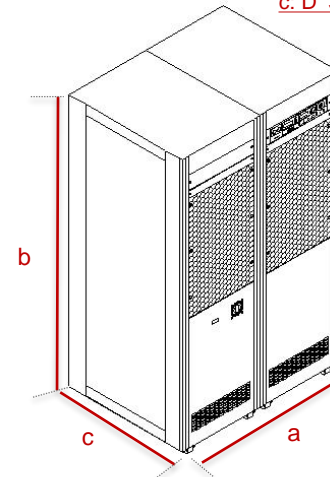
**Vibration Generator (A74)** a: W 52 in  
b: H 50 in  
c: D 41 in



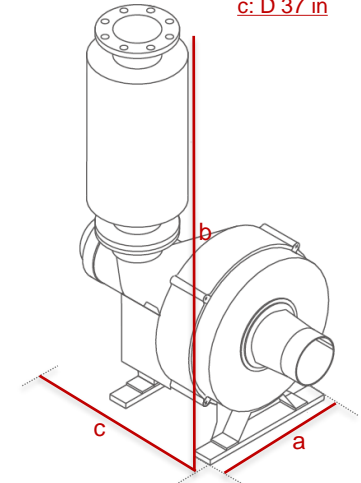
**Table Insert Pattern (unit: inch)**



**Amplifier (EM10HAG-A74)** a: W 46 in  
b: H 77 in  
c: D 34 in



**Blower** a: W 58 in  
b: H 111 in  
c: D 37 in



\*1) Random force ratings are specified in accordance with ISO5344 conditions. Please contact IMV or your local distributor with specific test requirements.  
\*2) Power supply: 3-phase 480 V, 60 Hz. A transformer is required for other supply voltages.  
\*3) Breaker capacity for 480 V.  
\*4) Above 4,000 Hz, the force rolls-off at a rate of -6 dB/oct.  
\* For random vibration tests, please set the test definition of the peak value of acceleration waveform to operate at less than the maximum acceleration of shock.  
\* Frequency range values vary according to sensor and vibration controller.  
\* Armature mass and acceleration may change when chamber is combined.