



IMV VIBRATION  
TEST SYSTEMS

A series

## Air-cooled Vibration Test Systems

# A65/SA5HAM A65/EM5HAM



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 76.2 mmp-p (3 inch stroke) \*1 which gives good balance between specification of velocity, acceleration and displacement. It also provides a maximum of 3.5 m/s shock velocity testing, which responds to the demand in lithium battery testing. Rapid creation of a test 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 76.2 mmp-p displacement
- Expansion in frequency range
- High velocity shock test

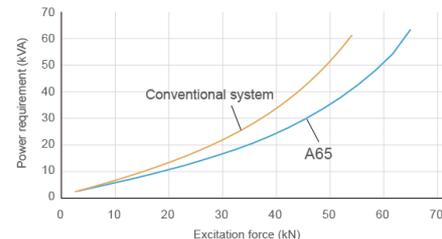
### 2. User friendly and secure

Greater security and functionality with improved energy savings.

### 3. User first principle

Intuitive interface guides the operator for easy use.

Comparison of consumed power per excitation force





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System Specification			
System Model		A65/ SA5HAM	A45/ EM4HAM
Frequency Range (Hz)		0- 2,600 <sup>*4</sup>	0-2,600 <sup>*4</sup>
Rated Force	Sine (kN)	65	65
	Random (kN rms) <sup>*1</sup>	65	65
	Shock (kN)	130	130
	High Velocity Shock (kN) <sup>*5</sup>	-	120
Maximum Acc.	Sine (m/s <sup>2</sup> )	900	900
	Random (m/s <sup>2</sup> rms)	630	630
	Shock (m/s <sup>2</sup> )	1,806	1,806
	High Velocity Shock (m/s <sup>2</sup> peak) <sup>*5</sup>	-	1,666
Maximum Vel.	Sine (m/s)	2.0	2.0
	Shock (m/s peak)	2.5	2.5
	High Velocity Shock (m/s peak) <sup>*5</sup>	-	3.5
Maximum Disp.	Sine (mmp-p)	76.2	76.2
	High Velocity Shock (mmp-p)	-	76.2
Maximum Travel (mmp-p)		82	82
Maximum Load (kg)		1,000	1,000
Power Requirements (kVA) <sup>*2</sup>		83	83
Breaker Capacity (A) <sup>*3</sup>		150	150

Vibration Generator (A65)	
Armature Mass (kg)	72
Armature Diameter (φ mm)	446
Armature Resonance (Hz)	1,770
Allowance Eccentric Moment (N·in)	1,550
Mass (kg)	3,500

Power Amplifier	SA5HAM- A65	EM5HAM- A65
Maximum Output (kVA)	68	
Mass (kg)	1,000	1,150

Cooling (VAPE800/N2R)		
Mass (kg)	268	
Cooling Air Flow (m <sup>3</sup> /min)	66	
Environmental Data		
Input Voltage Supply (3 φ, V)	380/400/415/440	
Compressed Air Supply (Mpa)	0.7	
Working Ambient Temperature	Shaker (°C)	0-40
	Amplifier (°C)	0-40

Vibration Generator (A65) **a: W 1,310 mm**  
**b: H 1,253 mm**  
**c: D 1,040 mm**

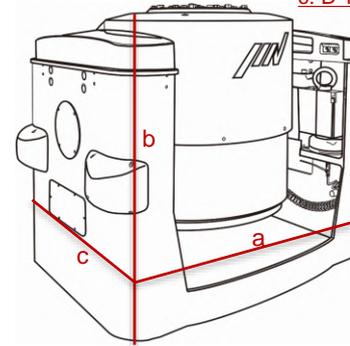
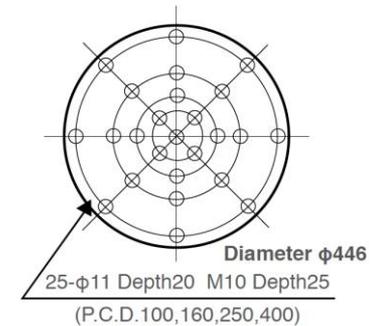
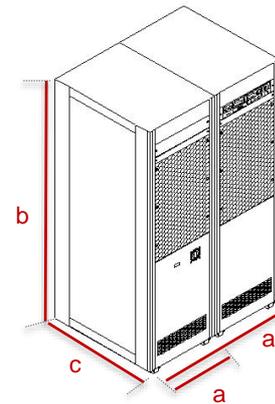


Table Insert Pattern (unit: mm)



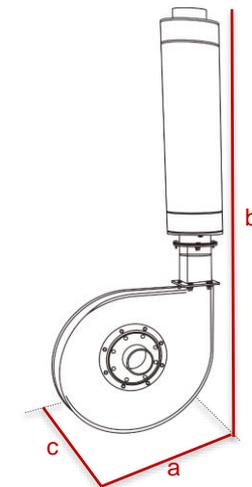
Amplifier



SA5HAM-A45  
**a: W 580 mm**  
**b: H 1,950 mm**  
**c: D 850 mm**

EM5HAM-A65  
**a': W 1,160 mm**  
**b: H 1,950 mm**  
**c: D 850 mm**

Blower



**a: W 1,294 mm**  
**b: H 2,540 mm**  
**c: D 871 mm**

<sup>\*1</sup> Random force ratings are specified in accordance with ISO5344 conditions. Please contact IMV or your local distributor with specific test requirements.  
<sup>\*2</sup> Power supply: 3-phase 380/400/415/440 V, 50/60 Hz. A transformer is required for other supply voltages.

<sup>\*3</sup> Breaker capacity for 480 V.

<sup>\*4</sup> Above 4000 Hz, the force rolls-off at a rate of -6 dB/oct.

<sup>\*5</sup> Maximum velocity 4.6 m/s. High velocity restricts maximum Shock force.

<sup>\*6</sup> Measured 150 mm above table at full-field.

\* The specification shows the maximum system performance.

For long-duration tests, de-rating by up to 70 % must be applied. Continuous use at maximum levels may cause failure.

\* In the case of Random vibration test, please set the test definition of the peak value of acceleration waveform to be operated 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.

**IMV CORPORATION**

