



IMV VIBRATION
TEST SYSTEMS

A series

Air-cooled Vibration Test Systems

A45/SA4HAM A45/EM4HAM



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

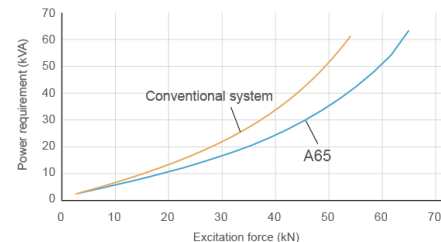
2. User friendly and secure

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 | | A45/SA4HAM | A45/EM4HAM |
| Frequency Range (Hz) | | 0-2,600 | 0-2,600 |
| Rated Force | Sine (kN) | 45 | 45 |
| | Random (kN rms) *1 | 45 | 45 |
| | Shock (kN) | 90 | 90 |
| | High Velocity Shock (kN) *4 | - | 80 |
| Maximum Acc. | Sine (m/s ²) | 900 | 900 |
| | Random (m/s ² rms) | 630 | 630 |
| | Shock (m/s ²) | 1,800 | 1,800 |
| | High Velocity Shock (m/s ² peak) *4 | - | 1,600 |
| Maximum Vel. | Sine (m/s) | 2.0 | 2.0 |
| | Shock (m/s peak) | 2.5 | 2.5 |
| | High Velocity Shock (m/s peak) *4 | - | 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) | | 600 | 600 |
| Power Requirements (kVA) *2 | | 57 | 57 |
| Breaker Capacity (A) *3 | | 100 | 100 |

| Vibration Generator (A45) | |
|-----------------------------------|-------|
| Armature Mass (kg) | 50 |
| Armature Diameter (φ mm) | 436 |
| Armature Resonance (Hz) | 2,080 |
| Allowance Eccentric Moment (N·in) | 1,550 |
| Mass (kg) | 3,000 |

| Power Amplifier | SA4HAM-A45 | EM4HAM-A45 |
|----------------------|------------|------------|
| Maximum Output (kVA) | 44 | |
| Mass (kg) | 900 | 1,000 |

| Cooling (VAPE710/P2R) | | |
|--|-----------------|------|
| Mass (kg) | 218 | |
| Cooling Air Flow (m ³ /min) | 48 | |
| 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 |

*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 380/400/415/440 V, 50/60 Hz. A transformer is required for other supply voltages.

*3) Breaker capacity for 480 V.

*4) Maximum velocity 4.6 m/s. High velocity restricts maximum Shock force.

*5) 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.

Vibration Generator (A30) **a: W 1,232 mm**
b: H 1,215 mm
c: D 1,040 mm

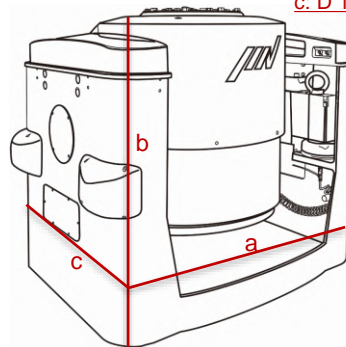
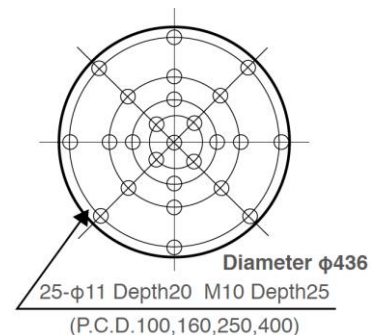
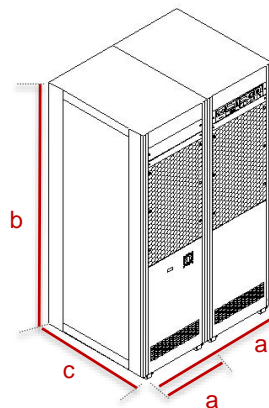


Table Insert Pattern (unit: mm)



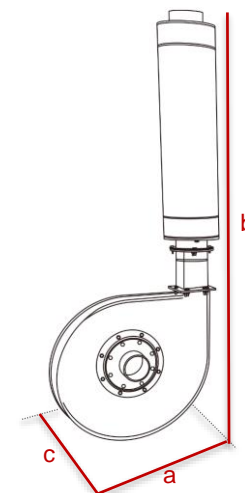
Amplifier



SA4HAM-A45
a: W 580 mm
b: H 1,950 mm
c: D 850 mm

EM4HAM-A45
a: W 1,160 mm
b: H 1,950 mm
c: D 850 mm

Blower



a: W 1,160 mm
b: H 2,405 mm
c: D 787 mm

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IMV CORPORATION reserves the right to change specifications and accessories without notice July, 2020

