



IMV VIBRATION
TEST SYSTEMS

A series

Air cooled Vibration Test Systems

A10/SA1HM

A10/EM1HM



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) which gives good balance between specification of velocity, acceleration and displacement. It also provides a maximum of 3.5m/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 Improvement of performance

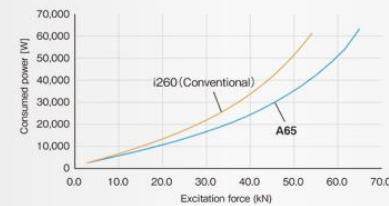
Expansion of test case and respond to high spec. test
Meet the needs for versatile test use.

- Improvement in excitation force
- Standard 76.2mm displacement
- Expansion in frequency range
- Crosstalk reduction
- High velocity shock test

② User friendly and security

Aware of security and functionality and realizes more energy-saving.

Comparison of Consumed power per excitation force A65 vs I260



③ User first principle

Intuitive interface leads the operator with user-friendly guidance.





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System Specifications

System Model		A10/SA1HM	A10/EM1HM
Frequency Range (Hz)		0-4500 ^{*3}	0-4500 ^{*3}
Force	Sine (kN)	10	10
	Random (kN rms) ^{*1}	10	10
	Shock (kN)	20	20(16) ^{*4}
Maximum Acc.	Sine (m/s ²)	900	900
	Random (m/s ² rms)	630	630
	Shock (m/s ²)	1818	1818
Maximum Vel.	Sine (m/s)	2.0	2.0
	Shock (m/s peak)	2.5	2.5(3.5) ^{*4}
Maximum Disp.	Sine (mmp-p)	51	51
	Maximum Travel (mmp-p)	64	64

Vibration Generator (A10)

Armature Mass (kg)	11
Armature Diameter (φ mm)	210
Shaker Body Diameter (φ mm)	585
Armature Resonance (Hz)	3160
Allowance Eccentric Moment (N·m)	294
Maximum Payload (kg)	200
Mass (kg)	1080

*1) Force ratings are specified in accordance with ISO5344 conditions.

*2) Power supply: 3-phase 380/400/415/440 V, 50/60 Hz. A transformer is required for other supply voltages.

*3) Above 4000 Hz, the force rolls-off at a rate of -6 dB/oct.

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

* 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.

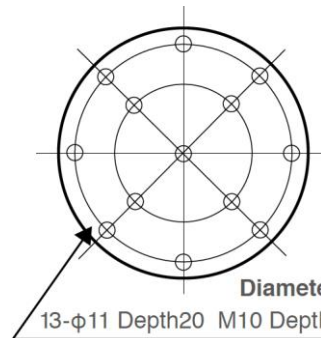
* Frequency range values vary according to sensor and vibration controller.

Cooling

System Model		VAPC630/P2R1
Mass (kg)		150
Cooling Air Flow (m ³ /min)		15
Environmental Data		
Power Requirement (kVA) ^{*2}		20.4
Input Voltage Supply (3φ, V)		380/400/415/440
Compressed Air Supply (Mpa)		0.7
Working Ambient Temperature	Shaker (°C)	0 - 40
	Amplifier (°C)	0 - 40

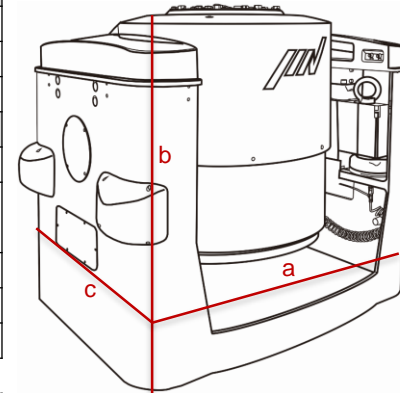
Power Amplifier

System Model	SA1HM-A10	EM1HM-A10
Maximum Output [kVA]	11	11
Mass [kg]	280	330



(P.C.D.100,160)

unit: mm



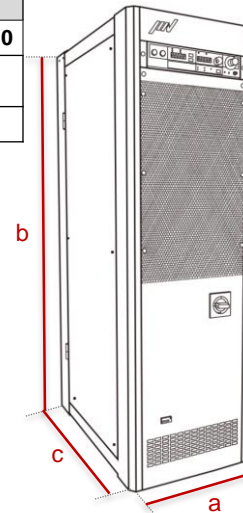
Shaker

Model: A10

a: W 946 mm

b: H 827 mm

c: D 676 mm



Amplifier

Model: SA1HM

Model: EM1HM

a: W 580 mm

b: H 1950 mm

c: D 850 mm



Blower

Model: VAPC630/P2R1

a: W 1045 mm

b: H 2285 mm

c: D 711 mm

IMV CORPORATION

