

The SignalForce® GW-V100 shaker is an excellent choice for small component testing applications. The smallest electromagnet shaker in the product line, the GW-V100 offers a 4.2 inch (106 mm) armature diameter with peak to peak displacement of 0.5 inches (12.7 mm).

Features

- Peak sine force: up to 225 lbf (1000 N)
- Random force rms: up to 120 lbf (533 N)
- Peak acceleration (sine): 100 g (980.7 m/s²)
- Velocity peak: 65 in/sec. (1.65 m/sec)
- Peak to peak displacement: 0.5 in (12.7 mm)
- Exceptional axial and torsional stability
- Recommended load: 0 to 10 kg
(Increasing load reduces max. displacement unless the ILS option is selected)



Options

- Trunnions
- Metric & Imperial table threads
- Vertical isolation
- Monobase: 300 mm square
350 mm square
- Pneumatic load support ILS
- Degauss
- High frequency analog amplifier
- Quiet mode

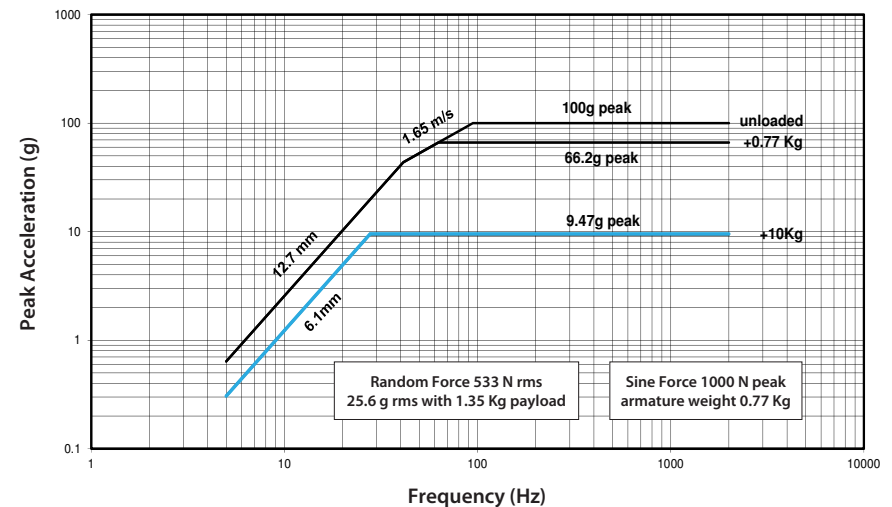
Typical Applications

- Component vibration testing
- Structural testing/modal excitation
- Sensor calibration

Sine Performance Envelope

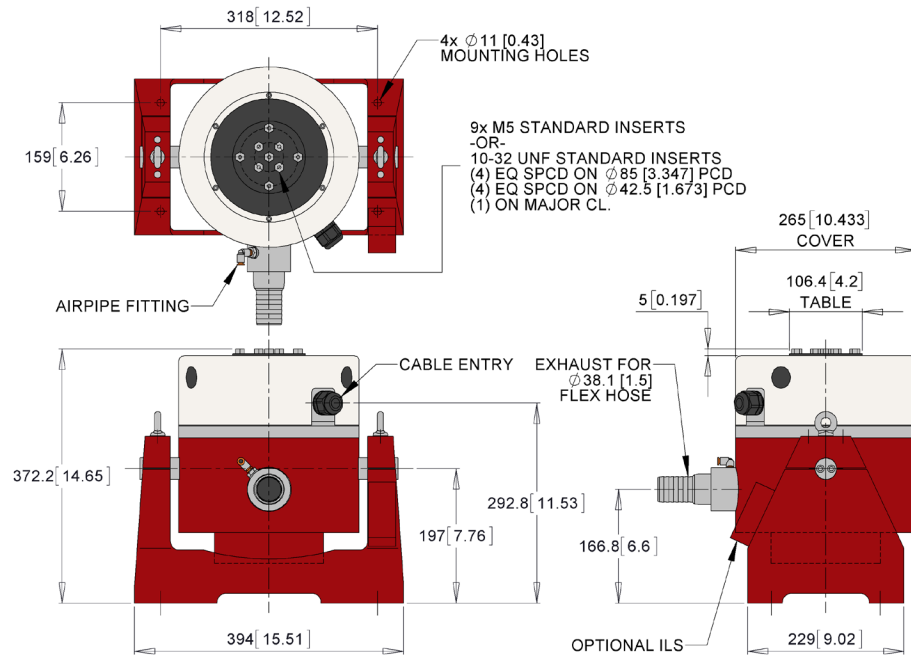
GW-V100 / DSA5-1K

Bare table = ■ 22 lbs (10 kg) load = ■



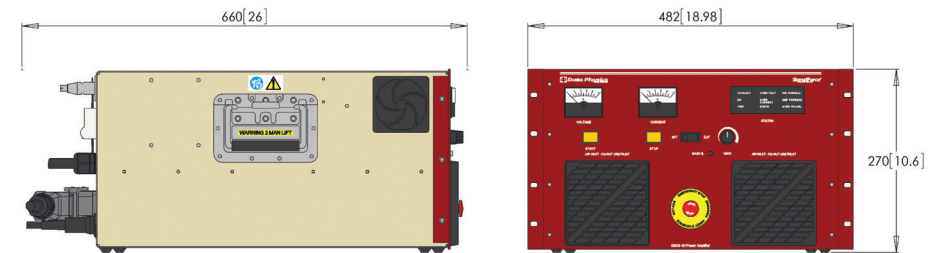
	Maximum Sine Force (pk)		Maximum Random Force ¹ (rms)		Maximum Shock Force ²		Maximum Acceleration (Sine)		Maximum Velocity		Displacement Peak to Peak		Armature Diameter		Armature Mass		Insert Threads		Armature Resonance	Frequency Range (Hz)		Static Load Support – Axial Stiffness		Electrical Power Consumed ³	Shaker Body Mass ⁴	
	lbf	N	lbf	N	lbf	N	g	m/s ²	ips	m/s	in	mm	in	mm	lbs	kg	UNF	Metric	Hz	Min.	Max.	lbf/in	kgf/mm	kVA	lbs	kg
GW-V100/DSA5-1K	225	1000	120	533	477	2120	100	980.7	65	1.65	0.5	12.7	4.2	106	1.70	.77	#10-32	M5	6850	5	5000	170.2	3.04	2.7	155	78

GW-V100



DSA 5-1K Amplifier

CE CE compliance to low voltage, EMC, and machinery directive.



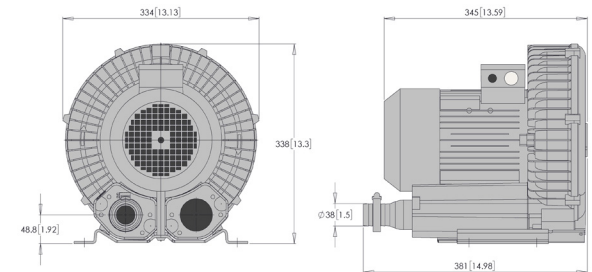
Cooling Blower (HFA0078)

Supplied hose length is 10 ft (3 m).

Height 13.3" (338 mm)

Width 13.1" (334 mm)

Depth 14.9" (381 mm)



Performance Notes Drawing measures are in millimeters [inches]. 1. Random force base on flat spectrum 20 Hz – 2 KHz @ 3 sigma with a non-resonant payload equal to or greater than twice the moving system mass. 2. For a 6 ms half sine shock pulse. 3. System utility include cooling blower. 4. Includes trunnion.

Environmental Characteristics

Ambient Working Temperature Range

Shaker	32°F to 77°F (0°C to 25°C) #
Amplifier (full power)	104°F (40°C), de-rated at 2% per degree C up to 113°F (45°C) max
Humidity	max 95% (non-condensing)

Acoustic Noise @ 1m

Shaker	Up to 105 dB (A) @1m ##
Amplifier	63 dBA @1m
Blower	70 dB (A) @1m ###

Facility Requirements

Power supply range	115 V / 230 V AC, 50 / 60 Hz Single Phase
	When operated on 115V two separate supplies are required. Blower start with amplifier start is not functional.

Shaker to amplifier cable	10 ft (3 m) fixed to shaker
Shaker to cooling blower	10 ft (3 m) hose

DSA5-1K Amplifier Characteristics

Rated Power	1 kVA
Switching Frequency	100 kHz nominal
Input Sensitivity	1.414 V rms for full output
Input Impedance	10 K ohm
Voltage Output	82 V rms
Current Output	14 A rms for full output
Signal to Noise Ratio	> -75 dB at full output
Distortion at rated output	< 1.0% approx. at 1 KHz
Cooling	200 CFM (0.094 m ³ /s)
Heat Rejected to Air	1500 BTU/hr (0.44 KW)

DSA5-1K Amplifier Dimensions

Height	10.6" (270 mm)
Width	19.0" (482 mm)
Depth	26.0" (660 mm)
Weight	93 lbs (42 kg)

Shaker Dimensions

(on trunnion / less exhaust)

Height	14.6" (372 mm)
Width	15.5" (394 mm)
Diameter	10.4" (264 mm)

(May vary with mounting options)

Shaker

Body Mass	155 lbs (78 kg)
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(Includes trunnion)

Performance de-rating will apply above 77°F (25°C)
Maximum value at full performance without payload.
Noise reduction enclosure available for cooling blower