

The Data Physics V13 Series air cooled shakers are a popular and versatile solution for an intermediate force level shaker. They are available in two different armature configurations: 9 inches (229 mm) and 13.2 inches (335 mm). Each shaker size is also available in two force ratings, depending on the power amplifier configuration.

### Standard Features

- Peak sine force: up to 2455 lbf (10930 N)
- Random force rms: up to 2250 lbf (10000 N)
- Velocity peak: 86 in/sec. (2.2 m/sec)
- Peak to peak displacement: 2.0 in (51 mm)
- Chamber interfaces

### Options

- Air or rubber isolated mounts for vertical testing only
- Isolated trunnions for vertical and horizontal testing
- Air glides
- Motorized guidance
- V-groove wheels and guidance rails
- Monobase systems to provide three axis testing with slip tables
- Head expanders and fixtures

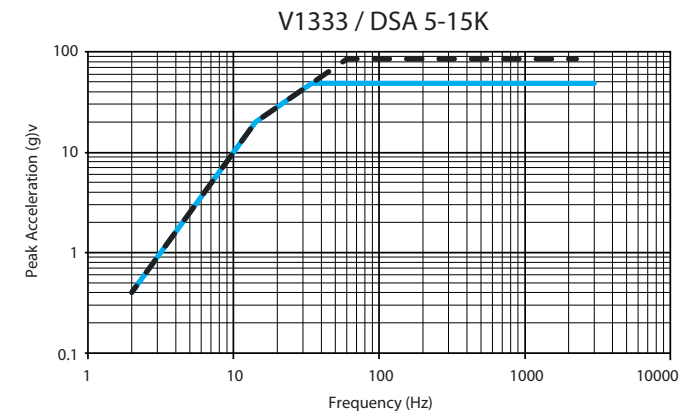
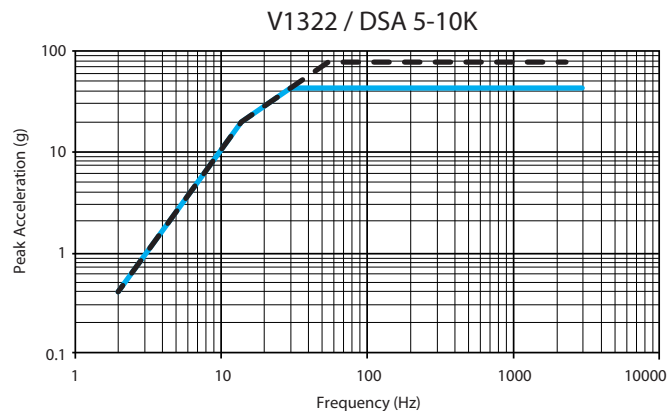
### Typical Applications

- Thermal barriers
- Acoustic enclosures
- Weatherproof enclosures for cooling blowers
- Economy field supply
- Electronic components
- Avionics
- Automotive



### Sine Performance Envelopes

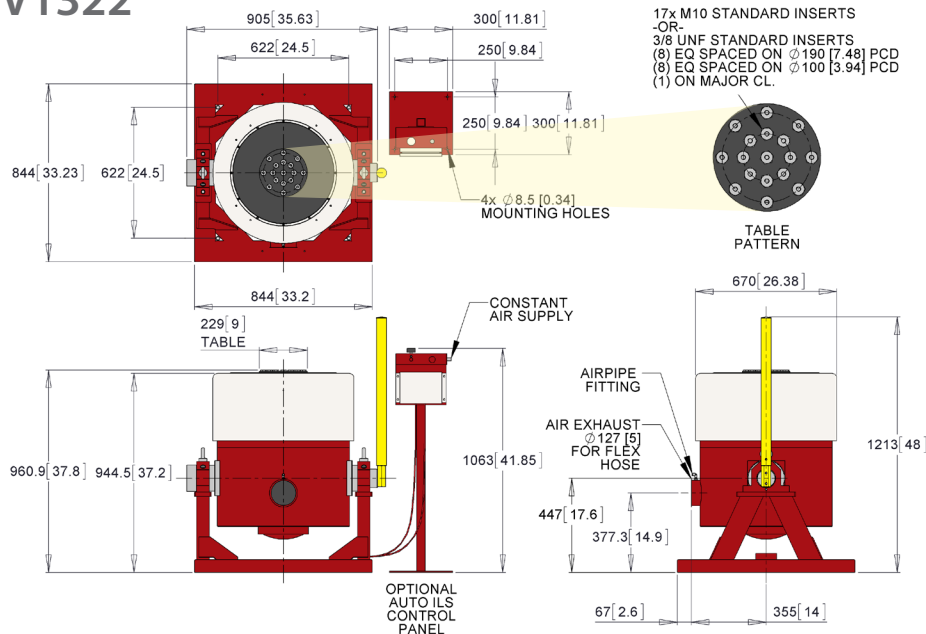
Bare table = ■ 22 lbs (10 kg) mass = ■



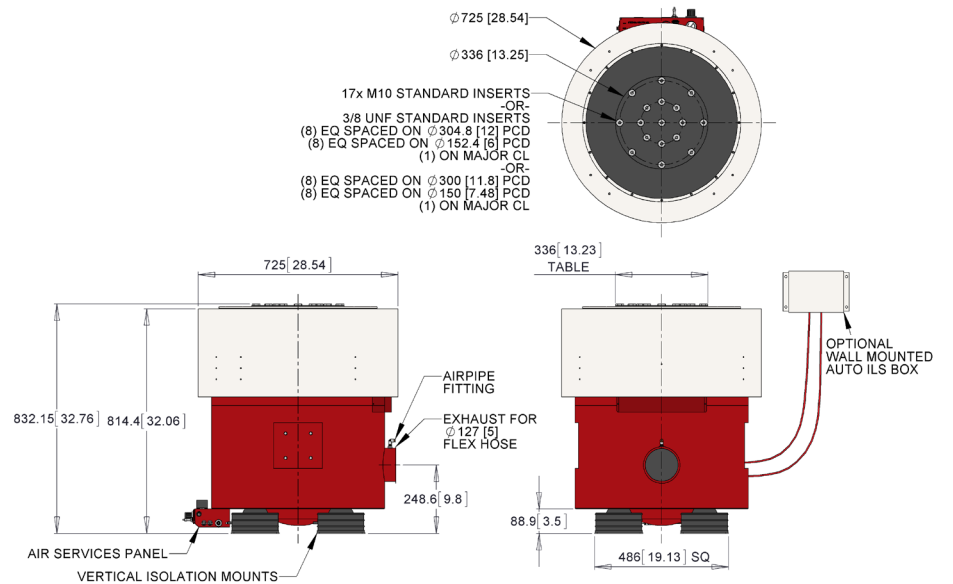
	Maximum Sine Force (pk)		Maximum Random Force (rms)		Maximum Shock Force*		Maximum Acceleration (Sine)		Maximum Velocity		Displacement Peak to Peak		Armature Diameter		Armature Mass		Insert Threads		Armature Resonance ±5%	Frequency Range		Static Payload Support		Electrical Power Consumed		Shaker Body Mass		Stray Magnetic Field**	
	lbf	N	lbf	N	lbf	N	g	m/s <sup>2</sup>	ips	m/s	in	mm	in	mm	lbs	kg	SAE	Metric	Hz	Min.	Max.	lbs	kg	kVA	lbs	kg	mT	Gauss	
V1322/DSA5-10K	2050	9100	1640	7300	4337	19292	76	745	86	2.20	2.0	51	9.0	229	26.9	12.2	3/8-24	M10	2400	DC	3000	350	160	18.0	2270	1029	<.5	5.0	
V1322/DSA5-15K	2455	10930	2250	10000	5209	23171	91	895	86	2.20	2.0	51	9.0	229	26.9	12.2	3/8-24	M10	2400	DC	3000	350	160	19.7	2270	1029	<.5	5.0	
V1333/DSA5-10K	2050	9100	1640	7300	4337	19292	72	705	86	2.20	2.0	51	13.2	335	28.5	12.9	3/8-24	M10	2700	DC	3000	350	160	18.0	2270	1029	<.5	5.0	
V1333/DSA5-15K	2455	10930	2250	10000	5209	23171	86	845	86	2.20	2.0	51	13.2	335	28.5	12.9	3/8-24	M10	2700	DC	3000	350	160	19.7	2270	1029	<.5	5.0	

\* Half sine at 6 mSec \*\* 1 in. (25 mm) above table

### V1322



### V1333



Measures are in millimeters [ inches ].

### Environmental Characteristics

#### Ambient Working Temperature Range

(non-condensing)

Shaker	50F to 77F (10C to 25C)
Amplifier	32F to 104F (0C to 40C)

Anti-condensation blower option available for the shaker when used in conjunction with a thermal chamber.

#### Acoustic Noise @ 1m

Shaker	Up to 72 dbA @ 1m**
Amplifier	63 dbA @ 1m with cooling fans at low speed, 78 dbA @ 1m with cooling fans at high speed. High speed fan engaged at <60% output current.
Blower	72 dbA @ 1m##

#### Humidity

Shaker	<95% non-condensing
Amplifier	<95% non-condensing

#### Facility Requirements

Power supply range	380/400/415/440/480 Vac 50/60 Hz 3 phase AC
Total electrical requirements	See table

**Weight#** 2270 lbs (1029 Kg)

\*\* Dependent upon operating frequency & payload.

# Typical weight, dependent upon mounting options selected.

## Noise reduction enclosures available for the cooling blower.

### Amplifier Characteristics

<b>Rated Power*</b>	10 kVA / 15 kVA
<b>Switching Frequency</b>	100 kHz nominal
<b>Input Sensitivity</b>	3 V rms for full output
<b>Input Impedance</b>	10 K ohm input impedance
<b>Voltage Output</b>	82 V rms
<b>Current Output*</b>	62 A rms / 186 A rms per fitted power module Each power module = 5KW Example: 15Kw = 3 power modules
<b>Signal to Noise Ratio</b>	> 75 dB
<b>Weight*</b>	638 lbs (290 kg) (10K) 661 lbs (300 kg) (15K)

\* Multiple listing reflects amplifier models – small to large.

#### Performance Notes

1. Random force based upon a flat spectrum 20Hz-2KHz @3 sigma with a non-resonant payload equal to or greater than twice the moving system mass.
2. System utility includes the cooling blower.
3. Specifications are subject to change without notice.

### Amplifier Dimensions

<b>Height</b>	50" (1273 mm)
<b>Width</b>	24" (600 mm)
<b>Depth</b>	32" (800 mm)

### Shaker Dimensions

<b>Height</b>	32.5" (826 mm)
<b>Width</b>	28.5" (725 mm)
<b>Depth</b>	29.2" (743 mm)

(May vary with mounting options.)

### Blower Dimensions

<b>Height</b>	22.3" (567 mm)
<b>Width</b>	20" (498 mm)
<b>Depth</b>	19.5" (495 mm)