

The SignalForce® V35 Series air cooled shakers offers a choice of three armature configurations: (13.4 in) 340 mm and (17.3 in) 440 mm for high acceleration testing and (25.2 in) 640 mm for production testing. All versions use rigid table designs to provide high quality dynamic performance. Other features include: automatic armature centering, economy field supply, vertical isolation mounts, isolated trunnions, air glides, chamber interfaces and monobase systems for three axis testing.



Standard Features

- Peak sine force: up to 8000 lbf (35.6 kN)
- Random force rms: up to 6520 lbf (29 kN)
- Velocity peak: 71 in/sec. (1.8 m/sec)
- Peak to peak displacement: 2.0 in (51 mm)
- Armature diameter: 13.4 in (340 mm), 17.3 in (440 mm), 25.2 in (640 mm)

Options

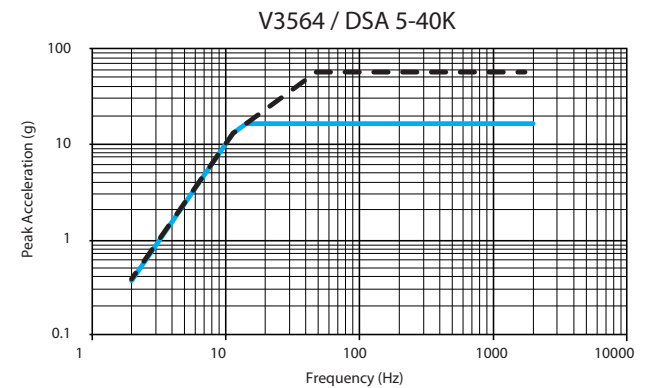
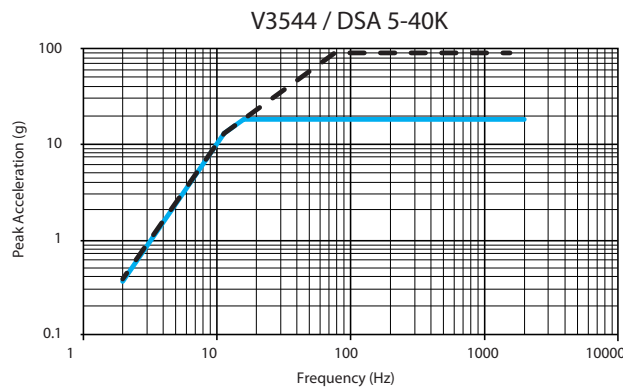
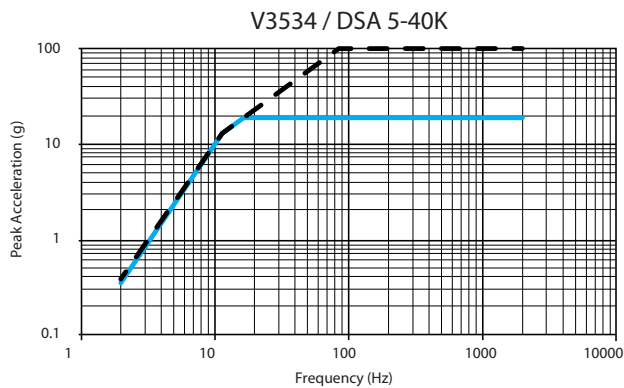
- Vertical isolation mounts
- Isolated trunnions
- Monobase with slip tables
- Air glides
- V-groove wheels and rails to provide accurate guidance below chambers
- Head expanders

Typical Applications

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

Sine Performance Envelopes

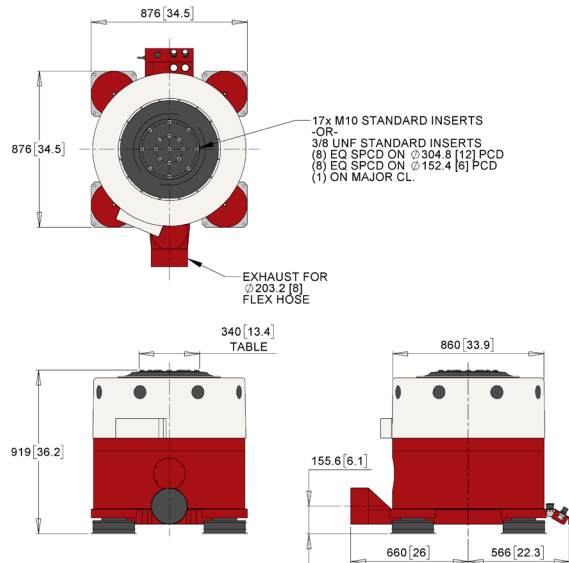
Bare table = ■ 350 lbs (158.8 kg) mass = ■



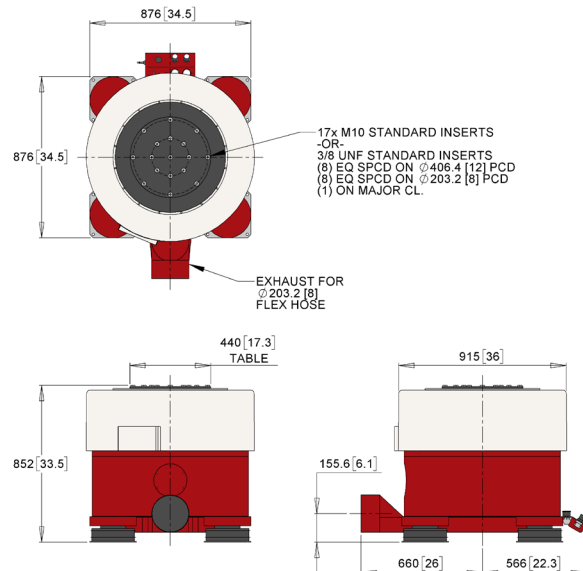
	Maximum Sine Force		Maximum Random Force		Maximum Shock Force*		Maximum Acceleration (Sine)#		Maximum Velocity		Maximum Displacement		Armature Diameter		Armature Mass		Armature Axial Resonance ±5%	Frequency Range (Hz)	Static Load Support		Uncrater Shaker Mass		Stray Magnetic Field**		Facility Power Requirements***
	lbf	kN	lbf	kN	lbf	kN	g	m/s ²	in/s	m/s	in	mm	in	mm	lbs	kg			Hz	Min - Max	lbs	kg	lbs	kg	
V3534 / DSA 5-40K	8000	35.6	6520	29	16970	75.5	100	981	71	1.8	2	51	13.4	340	70.5	32	2000	DC - 3000	1325	600	4189	1900	< 5	50	47
V3544 / DSA 5-40K	8000	35.6	6520	29	16970	75.5	91	892	71	1.8	2	51	17.3	440	88.2	40	2300	DC - 3000	1325	600	4189	1900	< 15	150	47
V3564 / DSA 5-40K	8000	35.6	6520	29	16970	75.5	56	549	71	1.8	2	51	25.2	640	143	65	2500	DC - 3000	1325	600	4189	1900	< 16	160	47

* At 6 mSec. ** At 25 mm (1 inch) above table. # Nominal mass and different insert styles may alter actual moving mass & therefore the maximum acceleration. V3534 max g limited to 100g (981 m/s²). *** Including blower.

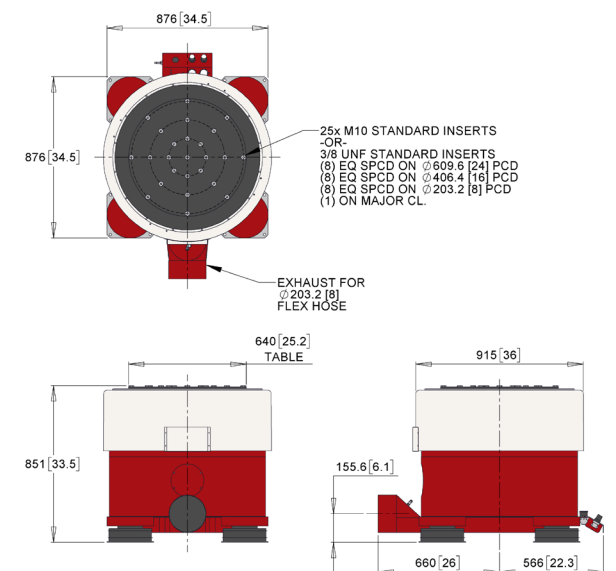
V3534



V3544



V3564



Measures are in millimeters [inches].

Environmental Characteristics

Ambient Working Temperature Range

(non-condensing)

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

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

Acoustic Noise @ 1m

Shaker	Up to 100dbA & 1m**
Amplifier	65 dbA @1m with cooling fans at low speed, 78dbA @ 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# 4189 lbs (1900 Kg)

** Dependent upon operating frequency & payload.

Typical weight, dependent upon mounting options selected.

Noise reduction enclosures available for the cooling blower.

Amplifier Characteristics

Rated Power	40 kVA
Switching Frequency	100 kHz nominal
Input Sensitivity	2.3 V rms for full output
Input Impedance	10 K ohm input impedance
Voltage Output	82 V rms
Current Output	62 A rms per fitted power module Each power module = 5KW Example: 15Kw = 3 power modules
Signal to Noise Ratio	> 75 dB
Weight	1292 lbs (586 kg)

Armature Insert Patterns

Table Dia. (mm)	340	440	640
Center Insert	1	1	1
152.4 mm PCD	8	-	-
203.2 mm PCD	-	8	8
304.8 mm PCD	8	-	-
406.4 mm PCD	-	8	8
609.6 mm PCD	-	-	8

Alternative patterns are available.

Amplifier Dimensions

Height	76.6" (1945 mm)
Width	23.6" (600 mm)
Depth	31.5" (800 mm)

Shaker Dimensions

Height	32.3" (820 mm)
Width	34.5" (876 mm)
Depth	34.5" (876 mm)

(May vary with mounting options.)

Blower Dimensions

Height	67.6" (1718 mm)
Width	42.9" (1090 mm)
Depth	27.2" (690 mm)

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.