

The SignalForce® LE-308-3 shaker is designed to perform production vibration testing of small to medium items over the frequency range from DC to 3 kHz. It utilizes field proven beryllium copper "J" flexures and high stiffness linear bearing for armature guidance. Heavy duty replaceable stainless steel inserts afford rigid attachment to test fixtures. The LE-308-3 can be used in a vertical only configuration (VI), in a Lin-E-Air isolated trunnion assembly with low frequency isolation (VH), or in a monobase (MST) for sequential 3 axis testing.

Standard Features

- Peak sine force: 3000 lbf (13.3 kN)
(3500 lbf (15.6 kN) EF model)
- Random force rms: 2700 lbf (12 kN)
(2900 lbf (12.9 kN) rms EF model)
- Velocity peak: 79 ips (2 m/s)
- Peak to peak displacement: 3 in (76.2 mm)
- Armature diameter: 9.25 in (235 mm)
- Automatic load support and armature centering
- Loop flexures and pogo bearing guidance
- 500 lb (227 kg) payload support

Options

- Vertical isolation mounts (VI)
- Lin-E-Air isolated trunnions (VH)
- Monobase with slip table
- Air glides and guidance systems
- Metric and imperial thread options
- Custom designed head expanders
- High frequency operation (5 kHz)

Typical Applications

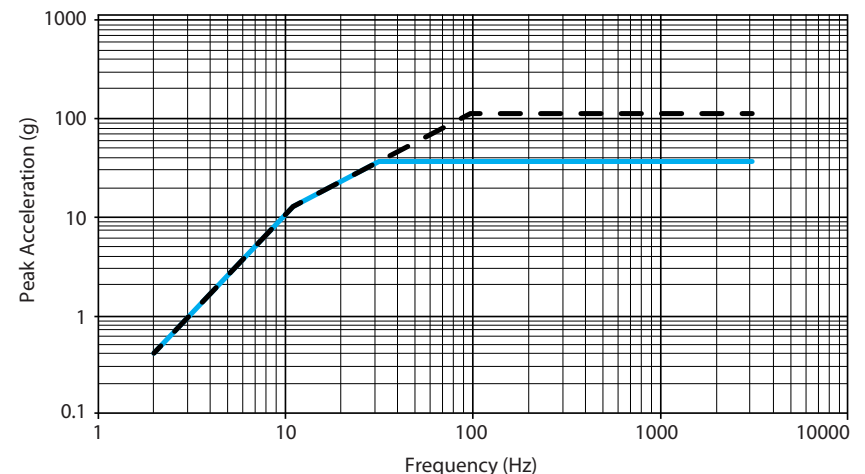
- Electronic components
- Aerospace
- Automotive



Sine Performance Envelope

LE-308-3 / DSA 15-2

Bare table = ■ 55.12 lbs (25 kg) load = ■



LE-308-3 / DSA 15-2

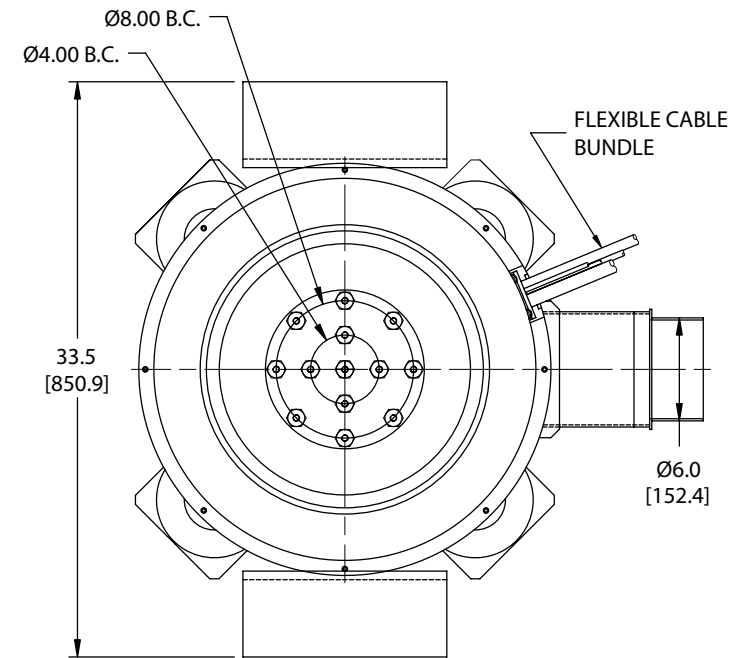
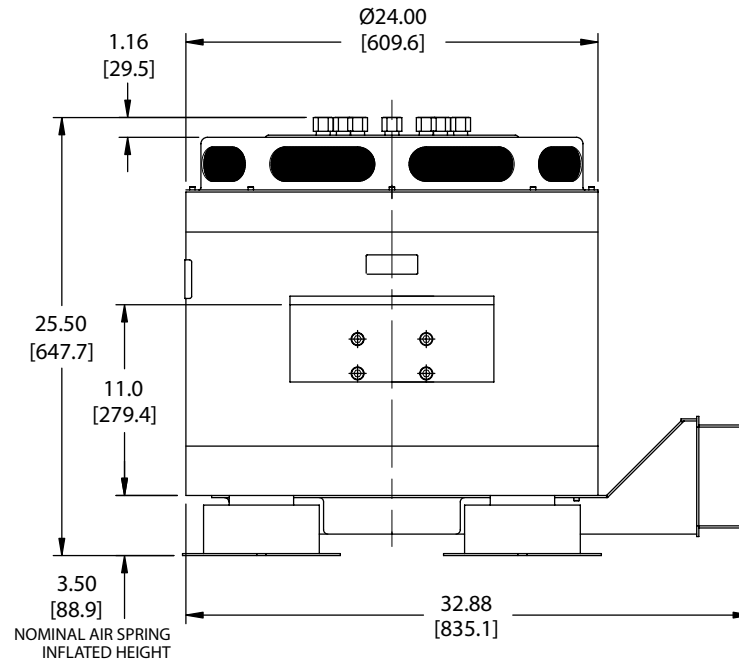
	Maximum Sine Force		Maximum Random Force		Maximum Shock Force		Armature Mass		Armature Diameter		Maximum Acceleration (bare table)		Maximum Velocity		Displacement Peak to Peak		Frequency Range	Armature Axial Resonance	Armature Suspension	Static Load Support		Stray Magnetic Field		Facility Power Requirements*	Uncrated Shaker Mass	
	lbf	kN	lbf	kN	lbf	kN	lbs	kg	in	mm	g	m/s ²	ips	mps	in	mm	Hz	Hz	Type	lbs	kg	gauss	mT	kVA	lbs	kg
LE-308-3	3000	13.3	2700	12.0	6600	29.4	30	13.6	9.25	235	100	981	79	2	3.0	76.2	5-3000	2111	beryllium copper loop flexures	500	227	< 5	.5	25	2420	1100
LE-308-3EF	3500	15.6	2900	12.9	7700	34.3	30	13.6	9.25	235	115	1128	79	2	3.0	76.2	5-3000	2111	beryllium copper loop flexures	500	227	< 5	.5	31	2475	1125

* kVA based on power draw to run full capacity of shaker – not amplifier capacity.

ARMATURE TABLE INSERT PATTERN

13 INSERTS, 3/8-16UNC (STD)
3/8-24UNF (OPTIONAL)
M8 X 1.25 (OPTIONAL)

1. ALL DIMENSIONS ARE FOR REFERENCE ONLY.
DIMENSIONS IN [] ARE IN MM.



Environmental Characteristics

Ambient Working Temperature Range

Shaker	+40F to +100F (+4C to +38C)
Amplifier	+32F to +104F (+0C to +40C)

Heat Dissipation

Shaker	8.6 kW
Amplifier	2.6 kW
Blower	3.7 kW (7.5kW EF model)

Acoustic Noise @ 1m

Shaker	102 dBA
Amplifier	80 dBA
Blower	92 dBA

Humidity

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

Facility Requirements

Blower cooling air flow	1200 CFM (34 m3/min) (1300 CFM (36.8 m3/min) EF model)
Amplifier cooling air flow	460 CFM (13 m3/min)
Compressed air supply	1 CFM at 90 psi (0.03 m3/min at 6.2 Bar)
Power supply range	208 – 480 VAC, (3) phase
Total electrical requirements	See table

Amplifier Characteristics DSA15-2

Rated Power	30 kVA
Efficiency	95%
Switching Frequency	50 kHz
Input Impedance	1.5 V rms for full output (10 K ohm input impedance)
Voltage Output	200 V rms
Current Output	166 A rms
Distortion	(at rated output) THD < 0.5% from DC to 1500 Hz 0.75% from 1500 to 2000 Hz 1.0% from 2000 to 3000 Hz
Noise & Hum	> 70 dB below full output, with shorted input
Weight	750 lbs (340 kg)

EMI shielded console, air cooled screens, and 3-phase line filtering standard.

Performance Notes

1. Random force rating based on flat spectrum from 20–2000 Hz, with 68 lbs (30.8 kg) non-resonant load. Ratings comply or exceed ISO 5344 standards.
 2. Shock pulses will yield different performance characteristics based on duration of the pulse. Consult application specialist to evaluate specific shock pulses.
 3. Heavy payloads may reduce available pk-pk displacement.
 4. Stray magnetic field measured at full field 6 inches (152.4 mm) above armature table.
 5. Shaker weight is variable based on mounting configuration.
 6. At maximum force bare table. Acoustic noise from a test will depend on test load and profiles run.
 7. Wet bulb temp not to exceed 80° F (27° C).
 8. Max performances shown are for no more than 10 minutes of operation.
 9. For continuous duty, the levels stated need to be reduced to 80%.
- Specifications are subject to change without notice.

Amplifier Dimensions

Height	52" (1321 mm)
Width	22" (561 mm)
Depth	42" (1054 mm)

Blower Dimensions

Height	23" (587 mm)
Width	19" (479 mm)
Depth	22" (568 mm)

EF Model Blower Dimensions

Height	33" (826 mm)
Width	27" (673 mm)
Depth	32" (808 mm)