



Configuration and System Performance

V850-240 imperial SHAKER

Performance Parameters

Armature diameter	9.45 in
Sine force peak (stabilised)	4000 lbf
Random force rms	3000 lbf
Half sine peak bump force ³	9000 lbf
Armature resonance (f _n)	2400 Hz
Useful frequency range	DC - 2600 Hz
Mass of moving element ⁵	30.89 ib
Velocity sine peak - full field	78.7 in/s
Acceleration sine peak ⁵	125 g _n
Acceleration random rms	60 g _n
Displacement (cont.) pk-pk	2.0 in

LDS amplifier SPA8-24K

Characteristics

Suspension axial stiffness	zero
Suspension cross-axial stiffness	380000lbf/in
Lin-E-Air body resonance	< 5 Hz
Shaker body mass	2480 lb
Internal load support capability	772 lb
Stray magnetic field ¹	< 18 gauss
Low gauss option ¹	< 10 gauss
Cooling air flow Shaker	920 ft ³ /min
Cooling air flow Amplifier	1865 ft ³ /min
Compressed air supply required	100psi
Total electrical requirements Amplifier, FPS and blower	36.9 kVA

Environmental Data

Working ambient temperature range

Shaker	32° to 86 °F
Amplifier	34° to 86 °F

Acoustic noise at 1 metre distance²

Shaker ⁴	118 dBA
Amplifier	70 dBA
Blower	91 dBA

Total heat dissipation

Shaker - radiated from body	1.6 kW
Amplifier	2.65 kW
Blower	14.7 kW

- 1 Measured at 6 inch above armature table, full field
- 2 Measured at a distance of 39 inch and 63 inch above floor level in enclosed cell
- 3 Due to the complex nature of shock pulses, LDS has sophisticated software to evaluate the performance. Please contact your local representative.
- 4 Max. noise when running at full level bare table performance
- 5 Ratings given with flush inserts

V850-240 Shaker Options

Alternative armature size	<input type="radio"/>
Armature Insert Selection M8	<input checked="" type="radio"/>
3/8"UNC/UNF	<input type="radio"/>

Mounting Selection

Trunnion mounted solid	<input checked="" type="radio"/>
Lin-E-Air body isolation & guidance system	<input type="checkbox"/>
Trunnion mounted with airlide mobility	<input type="radio"/>
Trunnion mounted with V-groove casters	<input type="radio"/>
Combination shaker/slip-table base	<input type="radio"/>
Air isolation mounts - floor level	<input type="radio"/>
Rubber isolation mounts - floor level	<input type="radio"/>
Low gauss kit	<input type="radio"/>
Silencer, shaker cooling fan -3 dBA reduction	<input type="radio"/>
Acoustic enclosure -8 dBA	<input type="radio"/>
Chamber floor support option	<input type="radio"/>
Thermal barrier	<input type="radio"/>

Key

- Standard - available on shortest delivery
- Option - stocked item available on short delivery
- Special option - non-stocked item



Systems are available in various forms to meet a customers exact requirements - mounted in a trunnion (standard item), or combined with a horizontal oil-film slip table, (combo base).

System Performance	V850-240 SPA8K	V850-240 SPA16K	V850-240 SPA24K
Sine Force (pk)	1600 lbf	3200 lbf	4000 lbf
Max Acceleration Sine (pk)	51.8 g _n	103.6 g _n	125 g _n
Random Force (rms)	1622 lbf	3000 lbf	3000 lbf
Max Acceleration Random (rms)	52.5 g _n	60 g _n	60 g _n
Velocity (pk) - full field	78.7 in/s	78.7 in/s	78.7 in/s





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SPA-K Series Amplifier Characteristics

Power range	8 - 24 kVA in 8 kVA increments
Total harmonic distortion	Typically 0.15 % when measured into resistive load
Input impedance	10 kOhm nominal
Input sensitivity	1 V rms input for 100 V rms output (Differential Input). Compatible with all standard controllers
Signal-to-noise ratio	> 68 dB
Amplifier efficiency	> 90 %
Switching frequency	150 kHz
Modulation range	DC to 10 kHz
Rated output voltage	100 V rms (sine)
Continuous output current	80 A rms (sine and random) per 8 kVA increment
Transient output current	240 A for 100 ms per 8 kVA increment
Full power bandwidth	20 Hz to 3 kHz

Module efficiency 93 %

Protection Integral protection to prevent the output devices working outside their specification limits

Safety Complies with the Essential Health and Safety requirements of the Machinery Directive 98/37/EC and the Low Voltage Directive 73/23/EEC

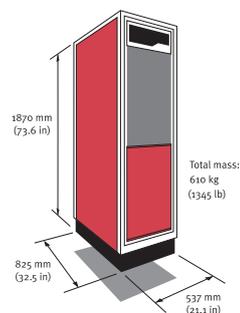
EMC EN50081-2 Emissions
EN50082-2 Immunity

Some of the features listed are available as standard, others as options. Please contact LDS for advice on the optimum specification to meet your system needs. Specifications are correct at the time of publication. LDS reserves the right to amend specifications without prior notice.

Make our experience your advantage

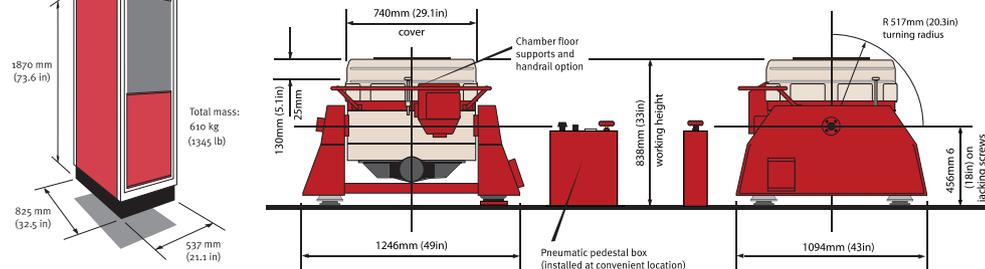
From application engineering, installation and training through to maintenance, spares and repairs, LDS offer a total service approach to keep your system operating efficiently and reliably. All LDS systems (standards and specials) are designed and manufactured to ISO 9001 standard. LDS offers a comprehensive range of vibration, measurement and analysis equipment. Please consult our website for details.

SPA-K Amplifier

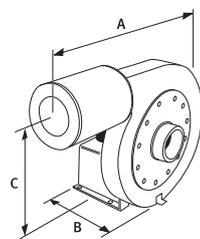


V850-240 Series Shaker

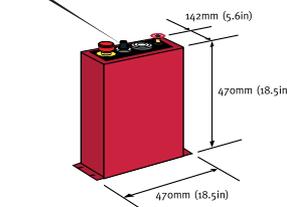
V850-240 Solid Trunnion Mounted
Total mass: 2458 lb



V850-240 Shaker Cooling Fan and Airbox



Pneumatic pedestal box, containing: emergency stop, Line-air suspension air control valve, armature position indicator and testload control valve.



Cooling Fan - V850-240

	Weight	dim A (in)	dim B (in)	dim C (in)
V850 - 50 Hz	231 lb	42.8	19.0	26.5
V850 - 60 Hz	227 lb	42.8	19.0	26.5

Armature Insert pattern - V850-240

Armature	pcd mm	pcd mm	pcd mm
Centre		4	8
Inserts	1	8	8

* Optional insert pattern - 8 inserts on 6 inch pcd

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