L.A.B

Your Only Source for Customer Focused Shock & Vibration Test Solutions

SD SERIES™ SHOCK SYSTEMS

TECHLAB SYSTEMS

MECHANICAL SHOCK

SD-SERIES™ SHOCK MACHINE



In today's world, products and packaging are required to go through an extensive amount of testing before reaching the distribution environment. Often, many products are subjected to a specific test standard that requires the shock testing. L.A.B SD-Series™ Shock Systems are used to conduct such tests, due to their ability to produce drop impacts that are controlled, reproducible and accurate.

SHOCK WITH CONFIDENCE

The SD-Series™ of mechanical shock machines are used in the design of rugged products and cost effective protective shipping packages. The SD-Series™ produces half-sine, sawtooth, and square wave pulses meeting military (MIL-SPEC) and industrial (ASTM, ISO, JEDEC) specifications, as well as other specified test requirements.

SD-SERIES™ FEATURES

- High Performance Carriage: every SD-Series™ Shock Test System incorporates a highly engineered aluminum alloy carriage skilfully designed and machined to precision. This ensures that the carriage has no resonant frequencies within the machine's operating range. Consequently, the resulting shock pulses are clean and do not require over-filtering.
- Specimens are firmly anchored to the mounting surface, which is equipped with numerous tapped holes machined to close tolerances. Each hole is strengthened with steel inserts.
- Fail-safe rebound brakes are incorporated on every design, requiring no auxiliary air or electrical services. The brake arrests the carriage after rebound, prevents secondary impacts, and maintains the carriage in a fail-safe position during the hoisting cycle.
- Full safety guards are standard equipment on all SD-Series™ machines. These expanded sheet metal safety enclosures surround the hoist mechanism and the carriage falling zone. Opening the electrically interlocked enclosure door will interrupt hoist operation. Incorporating these enclosures as well as compliance with other features allow the SD-Series™ full CE Compliance
- No special foundation is needed. A solid steel reaction mass is isolated from the floor by heavy-duty springs and shock absorbers. This unique feature prevents transmission of shock waves created by the carriage impact, and is standard on all models.
- Automatic Cycle Counter allows multiple tests without operator intervention.
- Complies with JEDEC, IEC, ASTM, ISO and other internationally recognized test standards.
- All SD-Series™ machines are manufactured in the USA using the finest materials available.

SD-Series™ Operation

Load sample and accelerometer to carriage. Easily set the desired drop height by adjusting the release mechanism on the scale. Ensure proper pulse pad. Close the safety enclosure and turn on the switch. The chain will lift the carriage until the release mechanism is reached and the carriage drops. That's it!

SD-SERIES™ OPTIONS

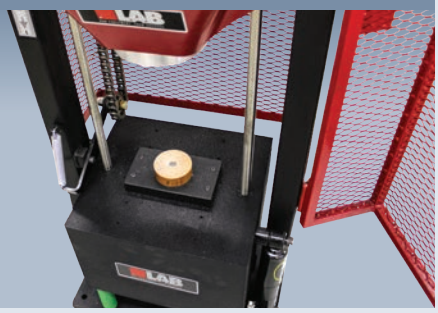
- Extended drop height as required by customer
- Half Sine Shock Programmers are calibrated to produce standard shock pulses
- Trapezoidal(square-wave) Pulse Cylinder pneumatically produces pulses and includes pressure regulation. A 13.8 Mpa (2000 psi) Nitrogen supply is required.
- Elastomer Half Sine Kit includes 9 elastomer modules, two mounting plates, and fasteners. This allows a wide variety of half sine/haver-sine pulses to be generated.
- Dual Mass Shock Amplifier produces short duration, high acceleration shock pulses on small items.
- Low Impulse Kit produces shock pulses with a velocity change of 1.5 m/s (5ft/sec) or less with a pneumatic cylinder that slows down the shock table prior to impact.
- Acceleration Kit for high energy pulse generation.
- Our Premium Data Analysis and Acquisition Systems; TLP (Test Lab Professional) and DAS105 accurately capture and analyze data from multiple tests, as well as provide quantitative results for real-time or post test evaluation.



CE COMPLIANT

SD-SERIES™ MODEL COMPARISON

SD-Series™





	METRIC	ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH
Machine Type	SD-10		SD-16		SD-24	
Size	254 x 254 mm	10 x 10 in	406 x 406 mm	16 x 16 in	610 x 610 mm	24 x 24 in
Test Load Rating	14 kg	30 lbs	91 kg	200 lbs	181 kg	400 lbs
Carriage Weight	20 kg	45 lbs	77kg	170 lbs	245 kg	540 lbs
Mounting Hole Pattern	M6x1 - 50 mm Grid		M8x1.25 - 75 mm Grid		M10x1.25 - 100 mm Grid	
Standard Carriage Fall	1067 mm	42 in	1524 mm	60 in	1524 mm	60 in
Optional Carriage Fall	*** Consult Factory ***					
Maximum Acceleration	3500 G		1500 G		1000 G	
Minimum Pulse Duration	0.3 ms		0.5 ms		1 ms	
Isolated Base Weight	228 kg	500 lbs	952 kg	2100 lbs	1497 kg	3300 lbs
Floor Space Required	305 x 635 mm	12 x 25 in	686 x 838 mm	27 x 33 in	1219 x 1219 mm	48 x 48 in
Machine Overall Height	Selected Carriage Fall		Selected Carriage Fall		Selected Carriage Fall	
	Plus 1321 mm	Plus 52 in	Plus 1549 mm	Plus 61 in	Plus1829 mm	Plus 72 in
Shipping Weight	431 kg	950 lbs	1588 kg	3500 lbs	2495 kg	5500 lbs
Standard Power Inputs	220-230V/3 PH/50 or 60Hz					

Please consult L.A.B. Equipment LLC for non-standard specifications.

Due to our continuous commitment to product development, the above specifications and features may be modified without notice.

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