

SHOCK TOWER

Pull-down Drop Shock Tester

PDST-230M, 230S

PDST-230 is a new mechanical based shock testing system in which the shock table is pulled-down mechanically, with compact built that is able to conduct mechanical shock test on to smartphones, tablets, computers and other devices. This new shock machine meets a wide range of requirements for shock testing and with compact size is easily installed in various location.

Features

- Pull-down type shock machine (patent pending)
- Compact size (about 50% downsizing comparison with the conventional free-fall style shock machine)
- Shock pulse up to $300,000\text{m/s}^2$ (30,000G) by dual-shock amplifier
- Selectable of 2 models (multi-shock generator or single cushioning pad)
- High repeatability
- Safety accessories are standard equipment

Compliance Standard

- IEC 60068-2-27
- JEDEC (JESD22-B111)
- JEITA (ET-7409/106)
- MIL-STD-810
- JIS C 60068-2-27

Specification

Model	PDST-230M	PDST-230S
Table size (mm)	236 × 236	
Testable mass (kg)	up to 20	
Shock pulse shape	Half-sine	
Shock acceleration range (m/s^2)	490 ~ 7840 (50 ~ 800G)	1470 ~ 22540 (150 ~ 2300G)
Optional shock acceleration range (m/s^2)	98,000 (10000G) ~ 294,000 (30,000G) with 0.07~0.2ms *HGP150 use	
Pulse duration range (ms)	2.5 ~ 20 (multi-shock generator)	0.5 / 1 / 3 (single cushioning pad) * select 1 in 3 programmers
Velocity change (m/s)	15 max.	
Base	Pneumatic springs and hydraulic damper device	
Break system	Pneumatic-hydraulic brake system	
Test mode	Single shot / Multi-shock mode	
Size (W × D × H mm)	650 × 800 × 1800	
Capacity (kg)	1500	
Power supply	100 ~ 240VAC	
Air supply	over 0.8MPa and 350dm ³	
Option	Shock programmers (duration is 0.5ms / 1ms / 3ms), Shock Manager SM-500, Dual-shock amplifier HGP series, Signal light for safety, Air compressor, Acceleration pick-up	

PDST series



PDST-230M



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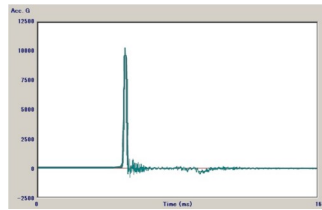
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Accurate Shock Pulse

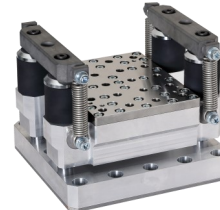
Generated shock pulse on PDST is always clear, noiseless and with high repeatability of up to 300000m/s^2 (30000G) with the optional dual shock amplifier, HGP-150.



9800m/s^2 (1000G)@2.5ms



98000m/s^2 (10000G)@0.2ms

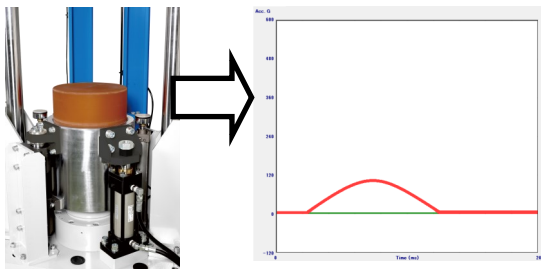


HGP-150

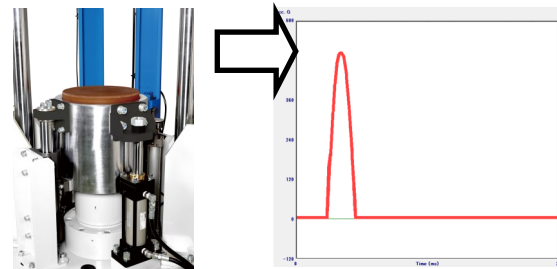
Built in Multi-Shock Generator

Multi-shock generator (MSG, see the figures below), technology unique to us, for shock tests, is built into the PDST-230M. In a general shock machine, the duration of a shock pulse corresponds to the hardness of the shock programmer. This means the programmer needs to be changed if you require a different duration of the shock pulse.

However, the MSG is a mechanical based function of the shock machine that can modify the displacement of the shock programmer by changing the height of the metal ring. Therefore, the generated shock duration of the shock pulse on the MSG is variable between short to long with the use of only a single shock programmer. This will contribute to the efficiency of conducting shock tests and is relatively stress-free for the testing engineers.



MSG programmer with high exposure generates shock pulse with long duration.

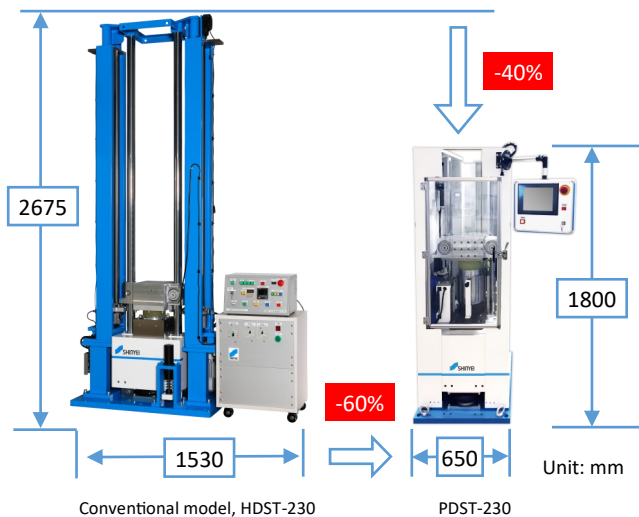


MSG programmer with low exposure generates shock pulse with short duration.

Compact Body

Although the PDST body size is very compact when comparing with the conventional free-fall style shock machines, its performance is almost identical to them because the PDST has a unique function in which the shock table is pulled down vertically mechanically.

This model can be installed easily in various locations as its area and volume are dramatically smaller than conventional models.



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