

SE-201

Shock Exciter



Applications

- ✓ shock testing of small assemblies / parts
- ✓ secondary calibration of shock transducers, complete measuring instruments according to ISO 16063-22
- ✓ secondary calibration of shock accelerometer reference standards

Selected Data

- ✓ broad amplitude range $5 g_n \dots 10\,000 g_n$
- ✓ pulse duration up to 5 ms
- ✓ sensor mass (DUT) up to 80 g

Features

- ✓ type of excitation: half sine shock
- ✓ good repeatability of shock
- ✓ position of DUT: vertical
- ✓ realization of all automatic calibrations according to own test regime (up to 1 shock/s)
- ✓ upgradeable to a CS Q-LEAP™ shock calibration system
- ✓ low transverse motion of DUT
- ✓ automated regulation of amplitudes up to $10\,000 g_n$ is possible



Specification

The SE-201 is a pneumatically driven shock exciter which provides a wide amplitude range. It uses the hammer-anvil principle to generate the shocks. A projectile that is accelerated by pressurized air is used as hammer. While the air pressure is kept constant, the kinetic energy of the projectile can be controlled by a motor-driven mechanical stop that allows a precise adjustment of the projectile's starting position. Thus the SE-201 allows an automatic control of the shock amplitude. All mechanical parts are built from wear-

resistant materials, ensuring best stability of the shock exciter and providing a good repeatability of shocks.

The SE-201 can be used for calibration purposes (secondary calibration according to ISO 16063-22) as well as for shock testing of small assemblies or parts.

It is optimized for low transverse motion of the DUT. For low shocks ($5 g_n \dots 250 g_n$), an air bearing is used to guide the anvil.

Technical data

Sensor mass (DUT), max.	80 g
Shock amplitude, min.	$5 g_n$
Shock amplitude, max.	$10\,000 g_n$
Pulse duration (typically)	0.1 ms...5 ms
Required air pressure	<ul style="list-style-type: none">AIR-02 input: 6 bar...10 bar (87 psi...145 psi)shock exciter: 3.5 bar...4 bar (51 psi...58 psi)
Required air quality	ISO 8573-1:2010, Class 3
Dimensions (H x W x L)	360 mm x 440 mm x 905 mm (14.2 in x 17.4 in x 35.6 in)

All data for environmental conditions: temperature $23^\circ\text{C} (\pm 2^\circ\text{C})$ and relative humidity 30 %...75 %

Components

- ✓ Pneumatically driven pulse generator
- ✓ Reference standard BN-02
- ✓ Shock Control Unit (SCU)

Low acceleration
shock application ▶



◀ Medium acceleration
shock application

