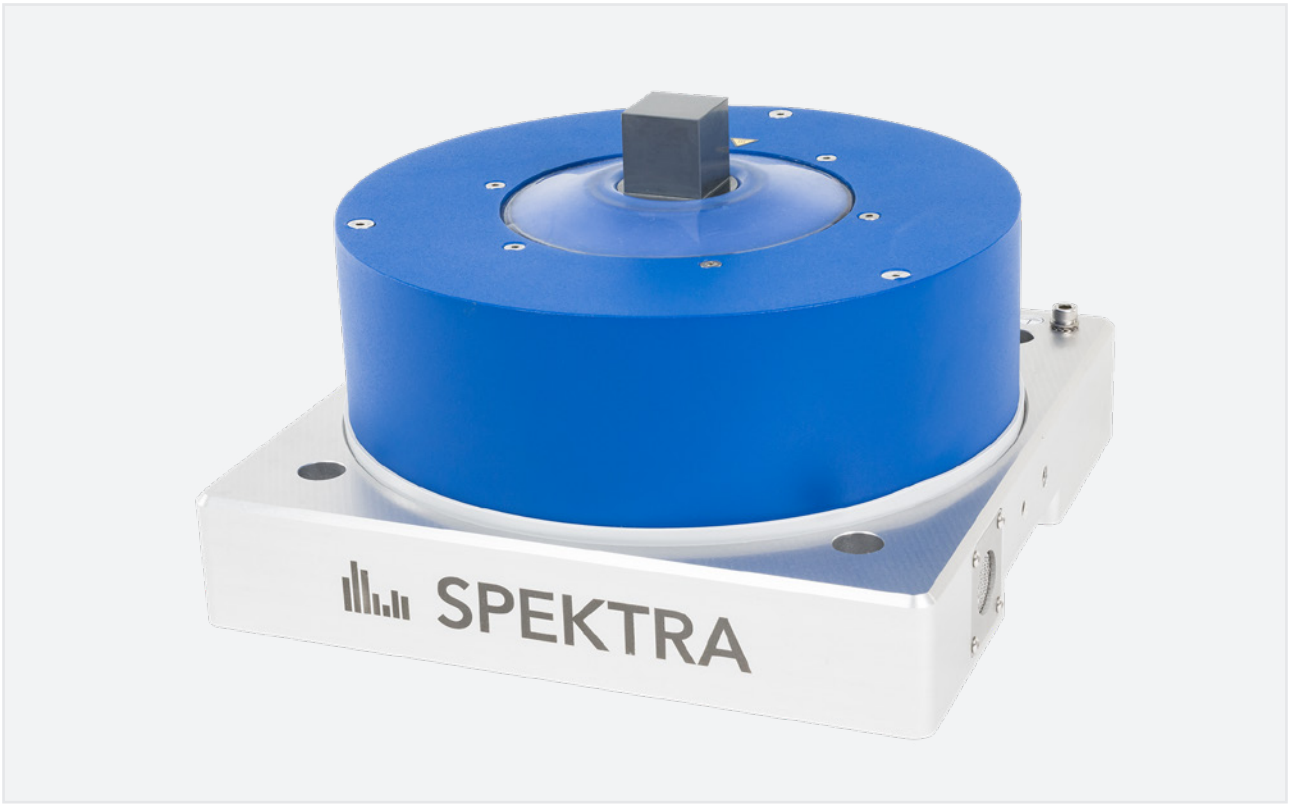
SE-21 / SE-21T

High frequency vibration exciter



Applications

- ✓ vibration tests in different directions to the excitation axis
- ✓ calibration of vibration sensors according to ISO 16063-21
- ✓ industry, research and development, education and training

Selected Data

- ✓ wide frequency range DC … 50 kHz
- ✓ acceleration up to 390 m/s² (39.8 g_n)
- ✓ low transverse motion < 5 % (typical) over the entire frequency range
- ✓ temperature range, max.: -40 °C … +120 °C

Features

- ✓ cubic armature made from technical ceramics for variable DUT coupling
- ✓ first axial resonance > 52 kHz (> 51 kHz for SE-21T)
- ✓ easy operation in climate chambers
- ✓ efficient electrodynamic drive
- ✓ no compressed air supply or zero position controller required
- ✓ optional internal reference accelerometer
- ✓ trunnion base for operation at a wide tilt angle range

Technical data

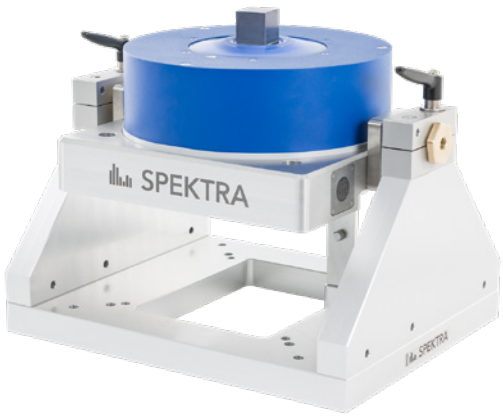
	SE-21	SE-21T
Force rating, max. (sine peak)	95 N (21.4 lbf)[1]	87.5 N (19.7 lbf)[1]
Frequency range	DC … 50 kHz 3 Hz … 50 kHz with optional internal reference standard	
Acceleration, max. (sine peak)	390 m/s² (39.8 g_n)[1]	350 m/s² (35.7 g_n)[1]
Displacement, max. (peak-peak)	10 mm / 0.39 in	
Transverse motion	< 5 % (typical) 3 Hz … 50 kHz[2]	
Payload, max.	2 kg / 4.4 lbs vertical 1 kg / 2.2 lbs horizontal	
Temperature range (in operation)	-20 °C … +80 °C -4 °F … +176 °F	-40 °C … +120 °C -40 °F … +248 °F
DUT mounting	• cube 30 mm / 1.2 in • DUT mounting with adhesive • thread patterns on request	
Stray magnetic field on table	< 3 mT	
Armature weight	245 g / 0.54 lbs	250 g / 0.55 lbs
Weight (total)	17 kg / 37.5 lbs	
Dimensions (H × W × L)	164.5 mm × 270 mm × 270 mm (6.5 in × 10.6 in × 10.6 in)	

All specifications are at room temperature unless otherwise specified.
1) interval mode of operation
2) up to 35 kHz: single peaks up to 10 % / better than ISO 16063-11/21;
up to 50 kHz: single peak more than 10 %

Accessories

- ✓ internal reference standard including BNC cable
- ✓ set for active cooling
- ✓ readout set for the internal temperature sensor
- ✓ trunnion base for operation of the vibration exciter at a wide tilt angle range
- ✓ suitable power amplifier
- ✓ adapter sets
- ✓ accessories case

◀ *The power amplifier PA 500 DM from SPEKTRA*



▲ *Trunnion base to tilt the SE-21 at any angle between 0°... 90°*

Performance

These diagrams show the performance of the SE-21 and SE-21T for operation alternating between 10 minutes at full load and 10 minute breaks (blue graph). Performance may vary for different cycles.

At 2 kHz, you can see a boost in the maximum acceleration. This is due to a new bearing design which minimizes transverse motion over the whole frequency range and reduces the moving mass above 2 kHz, thereby allowing for increased acceleration at equal force.