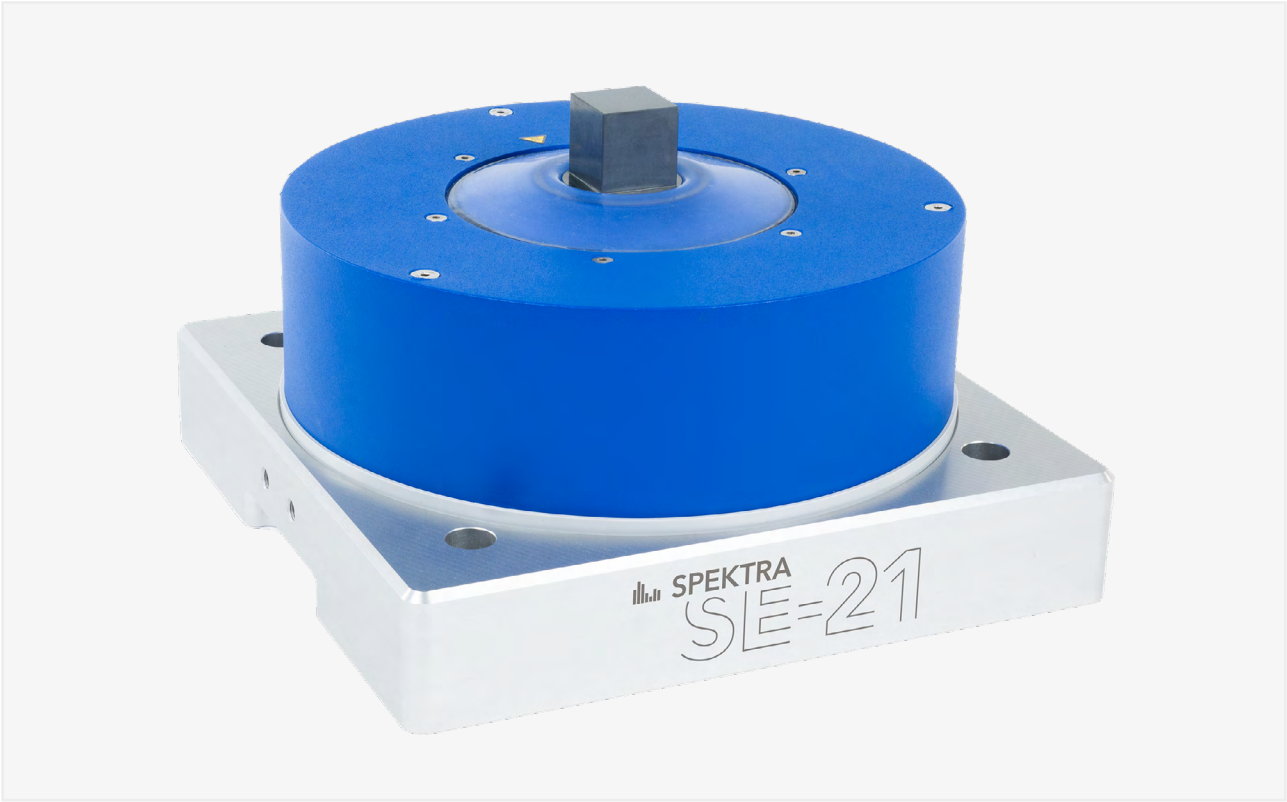
SE-21 / SE-21T

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, 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 frequency > 52 kHz (> 51 kHz for SE-21T)
- easy operation in climate chambers
- efficient electrodynamic drive
- internal reference accelerometer
- no compressed air supply or zero position controller required
- optional 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 internal reference accelerometer	
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. Technical data achieved with power amplifier PA 500 DM.

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 %

Options and accessories

- ✓ suitable power amplifier PA 500 DM
- ✓ internal reference accelerometer 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
- ✓ DUT mounting kit

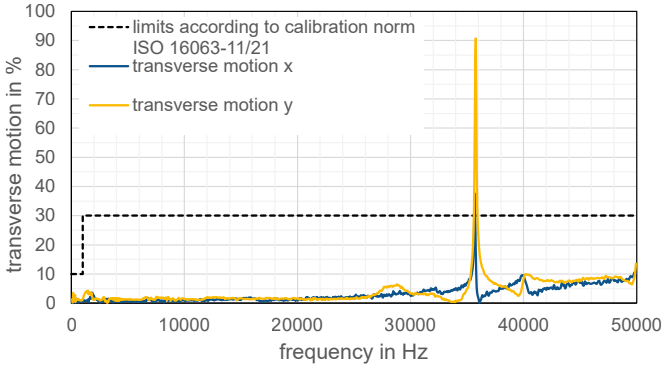


▲ *Trunnion base to tilt the SE-21 at any angle between 0°... 90°*

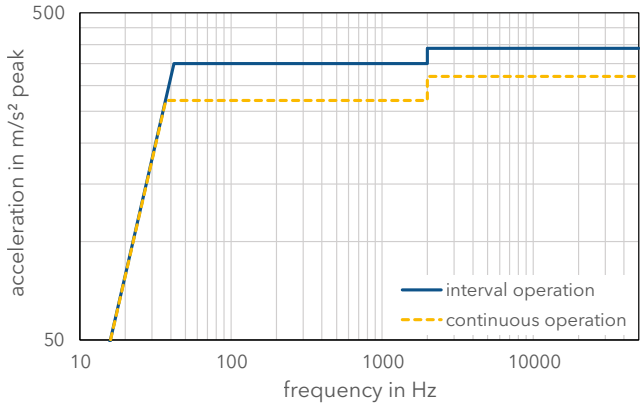
Performance

The diagrams below 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. The yellow graph shows acceleration values that can be safely used during continuous operation.
At 2 kHz and above, there is a boost in acceleration amplitude. 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.

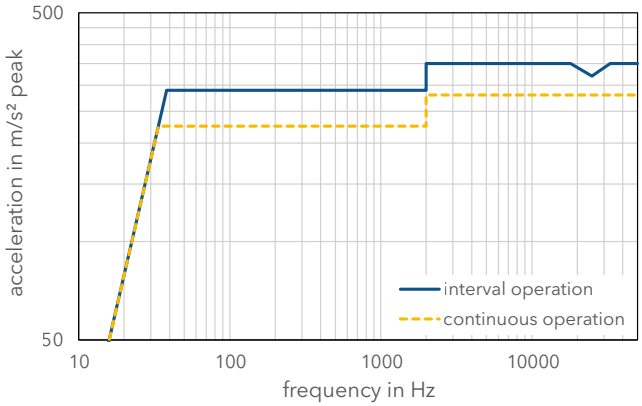
Typical transverse motion SE-21



SE-21 with PA 500 DM



SE-21T with PA 500 DM



System integration







The SE-21 exciters can be easily integrated into a system solution. With our suitable controllers, power amplifiers and a software with extensive functions, we guarantee an efficient workflow for your individual test and calibration tasks.



Get your quote!