

Vibration Test System TV 51110 - AC



DESCRIPTION

In all fields of industry, in aviation, the automotive industry and in power stations vibration analyses and measurements for determining the vibration transmission are increasingly carried out.

A large variety of measuring sensors are necessary to realize such investigations. These measuring sensors have to be checked for their accuracy and calibration in defined time intervals.

As most of the measuring sensors have a large measuring range and large frequency ranges, special shakers for calibrating these sensors are required.

TIRA has risen to this challenge and designed a unique shaker which meets these requirements. This newly developed shaker is equipped with a special guide system, a vibration system made of ceramic material and an air bearing. The air bearing has the advantage of being frictionless, wear-free and damping spurious oscillations.

This shaker is characterized by a very high utilizable frequency range up to 25 kHz and with the appropriate measuring equipment it is optimally suitable for professional calibration applications.

AMPLIFIER BAA 500-T

| | |
|-----------------------|---|
| KVA ratings | 500 VA |
| Frequency range | DC-20 kHz |
| Voltage, max. | 45 V |
| Current, max. | 11.2 A |
| Load resistance | 4 Ohm |
| Input voltage | < 5 V |
| Distortion | <0.1 % |
| Signal to noise ratio | > 90 dB |
| Weight | 29 kg (63.9 lb) |
| Size (WxHxD) | 483 x 90 x 450 mm (19 x 3.5 x 17.7 in) |



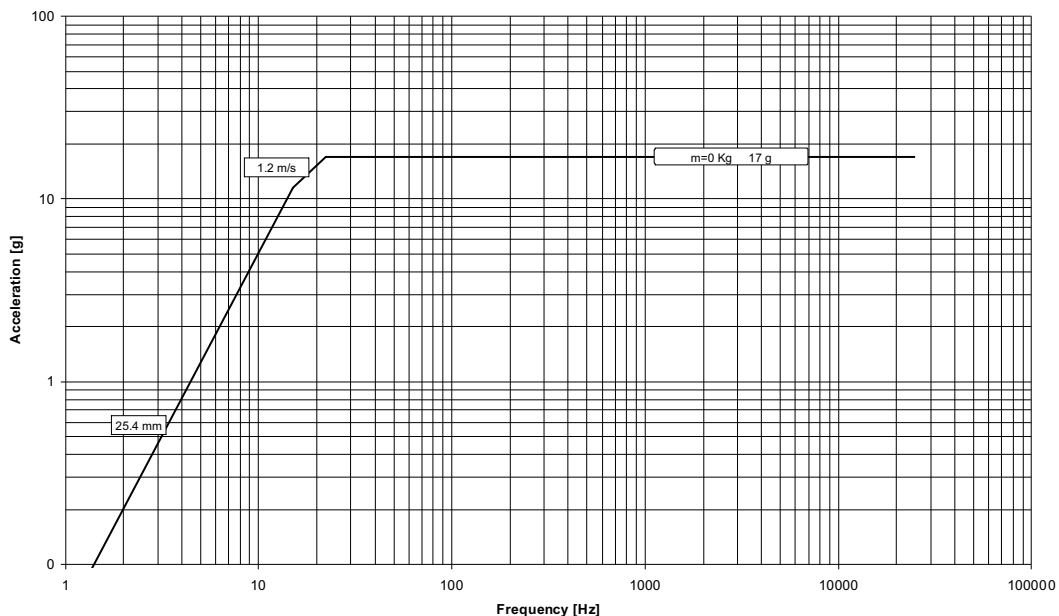
TECHNICAL SPECIFICATION VIBRATION GENERATOR S 51110-AC

| | | | |
|---------------------------------------|-------------------------|--------------------|----------|
| Rated peak force (N lbf) | Sine/Random | 100/50 | 22/11 |
| Frequency range (Hz) | | DC-25000 | DC-25000 |
| Max. rated travel (mm inch) | Pk-Pk | 25.4 | 1.0 |
| Max. velocity (m/sec inch/sec) | Sine/Random | 1.2/1.2 | 47/47 |
| Max. acceleration (g) | Sine/Random | 17/8 | 17/8 |
| Max. power consumption at 230 V (kVA) | | 0.35 | 0.35 |
| Nominal impedance (Ohm) | | 4 | 4 |
| Effective moving mass (kg lb) | | 0.53 | 1.17 |
| Main resonance frequency (Hz) | | >19000 | >19000 |
| Weight with trunnion (kg lb) | | 18 | 39.7 |
| Armature (ø/mm ø/inch) | | 50 | 1.97 |
| Compressed air (bar psi) | Free from oil and water | 3 (app. 2.5 l/min) | 43.5 |

PERFORMANCE DIAGRAM

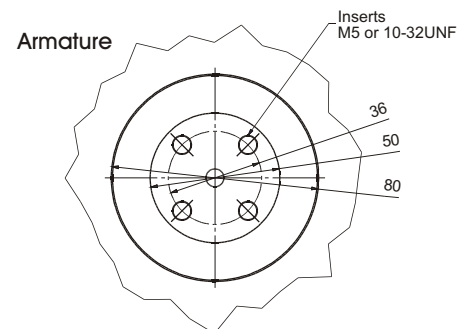
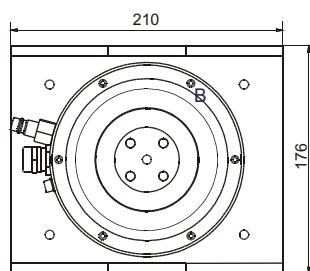
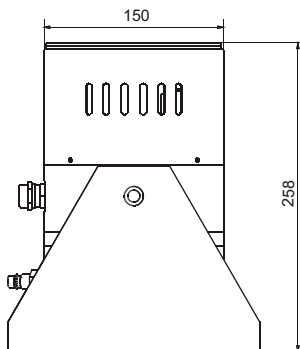
System Performance TV 51110-AC

Force: 100 N max. Acceleration: 17 g max. Velocity: 1.2 m/s max. Displacement: 25.4 mm



DIMENSIONS in mm

S 51110-AC (Example drawing)



Subject to modifications