

# Vibration Test System TV 51110-M

## DESCRIPTION

These exciters are specifically designed for modal and structure analysis. Modal thrusters up to 400 N (90 lbf) are excited by permanent magnets with light-weight rare earth magnets provided for mobile use. These thrusters are characterized by high cross axial stiffness.

From 650 N (146 lbf) onwards, modal thrusters permit a max. displacement of 50,8 mm (2 inches) due to TMC control. TMC is an electronic armature position control system for precisely coupling the modal thruster to the specimen.

The armature datum adjustment allows the operator to offset the nominal position of the armature in relation to the body. A preload can easily be set. The axial stiffness can be adjusted electronically.

A standard feature on all modal generators is a swivel-frame. This allows a great variety of coupling options.



Picture TV 51075-M

## AMPLIFIER BAA 120

|                       |   |
|-----------------------|---|
| KVA ratings           | 120 VA                                    |
| Frequency range       | DC-20 kHz                                 |
| Voltage, max.         | 22 V                                      |
| Current, max.         | 5.5 A                                     |
| Load resistance       | 4 Ohm                                     |
| Input voltage         | < 5 V                                     |
| Distortion            | < 0.1 %                                   |
| Signal to noise ratio | > 90 dB                                   |
| Weight                | 16 kg (35.3 lb)                           |
| Size (WxHxD)          | 483 x 90 x 450 mm<br>(19 x 3.5 x 17.7 in) |



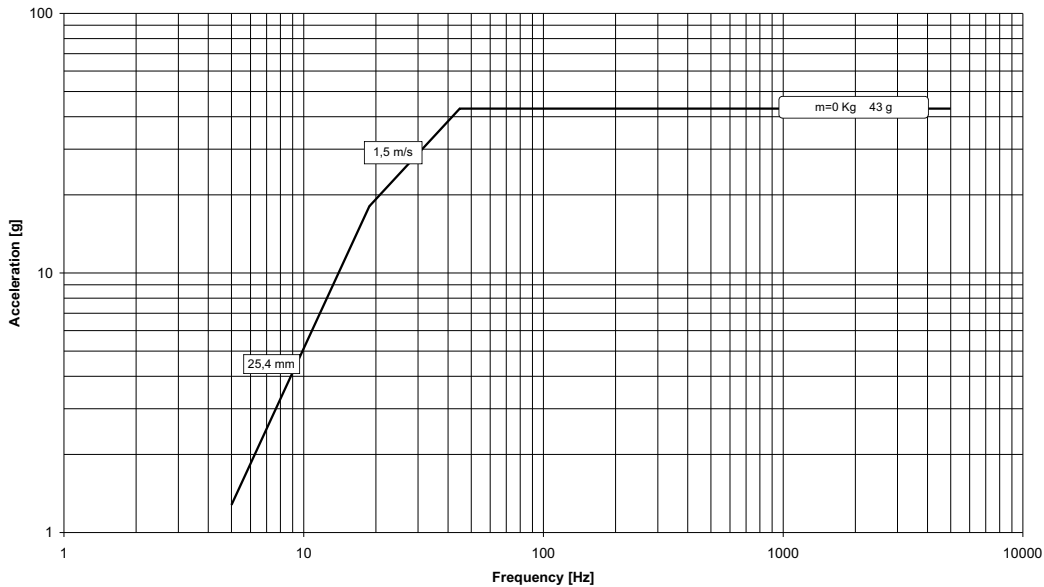
# TECHNICAL SPECIFICATION VIBRATION GENERATOR S 51110-M

|                                       |             |         |         |
|---------------------------------------|-------------|---------|---------|
| Rated peak force (N   lbf)            | Sine/Random | 100/70  | 22/15   |
| Frequency range (Hz)                  |             | DC-5000 | DC-5000 |
| Max. rated travel (mm   inch)         | Pk-Pk       | 25.4    | 1.0     |
| Max. velocity (m/sec   inch/sec)      | Sine/Random | 1.5/1.5 | 59/59   |
| Max. acceleration (g)                 | Sine/Random | 43/30   | 43/30   |
| Max. power consumption at 230 V (kVA) |             | 0.08    | 0.08    |
| Nominal impedance (Ohm)               |             | 4       | 4       |
| Suspension stiffness                  |             | 4       | 22.8    |
| Effective moving mass (kg   lb)       |             | 0.23    | 0.51    |
| Main resonance frequency (Hz)         |             | >6000   | >6000   |
| Weight with trunnion (kg   lb)        |             | 12      | 26.5    |
| Coupling Thread (ø/mm)                |             | M6      | M6      |

## PERFORMANCE DIAGRAM

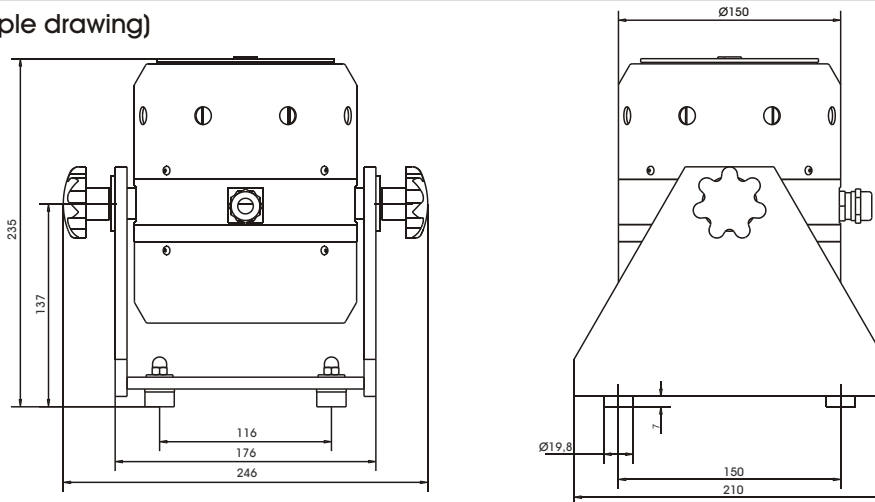
### System Performance TV 51110-M

Force: 100 N max. Acceleration: 43 g max. Velocity: 1.5 m/s max. Displacement: 25.4 mm



## DIMENSIONS in mm

S 51110-M (Example drawing)



Subject to modifications