

# Vibration Test System TV 51125-IN



## DESCRIPTION

TIRA is manufacturing a range of Inertialshakers from 125 N (30 lbf) to 650 N (150 lbf). The Inertialshakers (IN) are inertial mass devices which may be attached to large structures at any angle through 360 degrees.

The design of the Inertialshakers is distinguished by a high transverse vibration strength and a high axial stiffness. These permanent magnet shakers are completely enclosed and provide their own inertial support through the use of stiff spider suspension units at each end of the shaker.

A maintenance-free fan guarantees the cooling of the shaker. The cooling air is sucked in via a filter system.

The TIRA Inertialshakers (IN) have found applications in industries, aerospace and aircraft industries, civil engineering and shipbuilding and represent a very cost-effective method of inducing vibration in large structures which are difficult to access.

## AMPLIFIER BAA 500

|                       |   |
|-----------------------|---|
| 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                | 25 kg (55.1 lb)                           |
| Size (WxHxD)          | 483 x 90 x 450 mm<br>(19 x 3.5 x 17.7 in) |



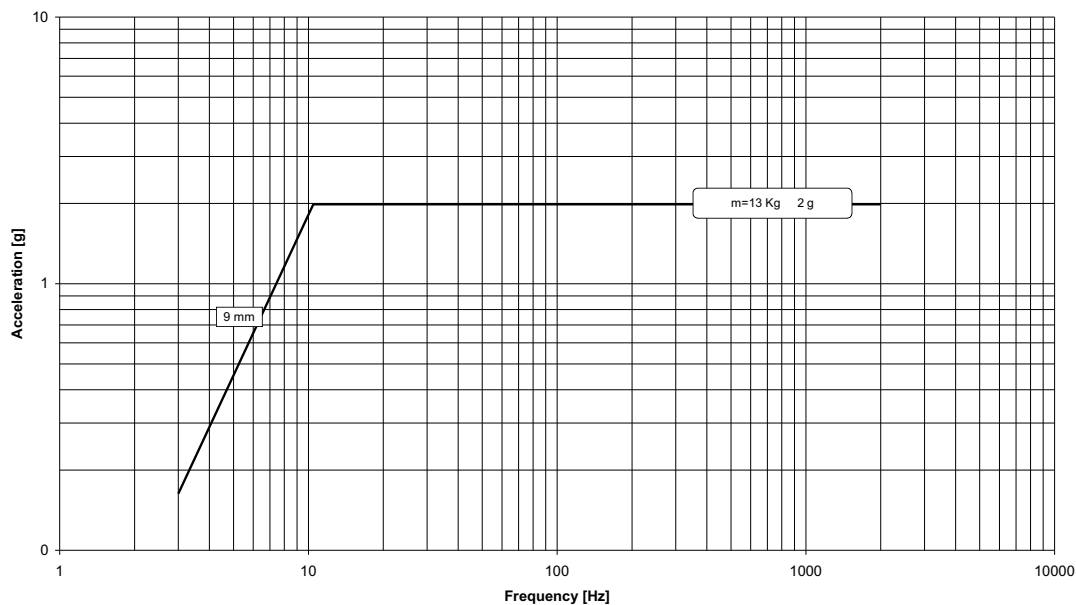
# TECHNICAL SPECIFICATION VIBRATION GENERATOR S 51125-IN

|  |             |         |         |
|--|-------------|---------|---------|
| Rated peak force (N   lbf)                         | Sine/Random | 250/150 | 60/30   |
| Frequency range (Hz)                               |             | DC-2000 | DC-2000 |
| Max. rated travel (mm   inch)                      | Pk-Pk       | 9       | 0.4     |
| Max. velocity (m/sec   inch/sec)                   | Sine/Random | 1.5/1.5 | 59/59   |
| Max. acceleration (g)                              | Sine/Random | 2/1.2   | 2/1.2   |
| Max. power consumption at 230 V (kVA)              |             | 0.4     | 0.4     |
| Suspension stiffness (N/mm   lbf/inch)             |             | 20      | 114.2   |
| Effective moving mass (kg   lb)                    |             | 0.35    | 0.8     |
| Weight (kg   lb)                                   |             | 13      | 28.7    |
| Coupling Thread (ø/mm)                             |             | M12     | M12     |
| Cooling (m <sup>3</sup> /h   ft <sup>3</sup> /min) |             | 40      | 24      |

## PERFORMANCE DIAGRAM

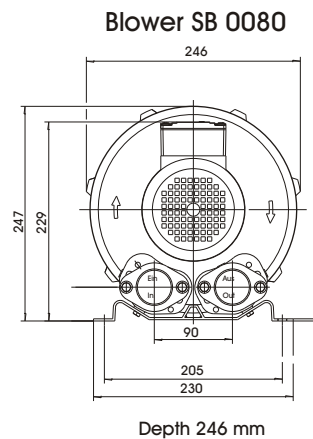
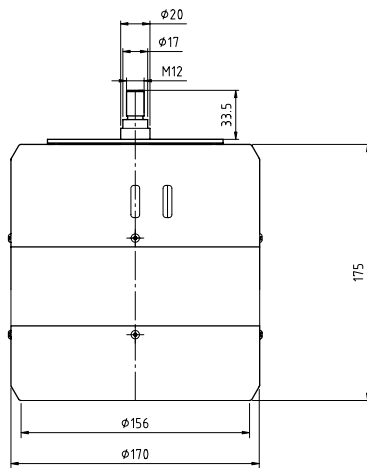
### System Performance TV 51125-IN

Force: 250 N max. Acceleration: 2 g max. Velocity: 1,5 m/s max. Displacement: 9 mm



## DIMENSIONS (mm)

S 51125-IN (Example drawing)



Subject to modifications