

Vibration Test System TV 59349/*-440

DESCRIPTION

TIRA shakers reproduce vibration under laboratory conditions for testing the dynamic strength and the reliability in all fields of applications of vibration testing technology.

On laboratory conditions sine, random, mixed-mode and shock tests are reproduced with the help of complete vibration testing systems.

These systems are indispensable in the field of quality assurance, research and development.

TIRA shakers are designed for long-time operation. They are distinguished by their high transverse vibration strength and high axial stiffness.

The electrodynamic shaker stands out for its rugged design and high stiffness. It is pivotally mounted and can be operated in horizontal and vertical direction.

A built-in automatic, pneumatic operated load compensation system allows the realization of the nominal vibration displacement, even with heavy test loads. The TIRA "AIT" system is a vibration isolation unit integrated in the frame for guiding the shaker horizontally and vertically. At low frequencies it guarantees the optimum vibration isolation as well as an exact guidance of the shaker body in the direction of the excitation. Low Base "LB" mounted shakers can be fitted with air isolation mounts, wheels and rails and air glides if the air isolation option is fitted. A maintenance-free fan guarantees the cooling of the shaker.

TIRA shakers, amplifiers and vibration control systems represent a complete test system offering the users the possibility to establish proof of the quality of their products according to national and international standards (such as DIN, ISO, BS, MIL, IEC, ASTM). Shakers with higher force are available on request.



AMPLIFIER A 2 11 3 090

KVA ratings	90000 VA
Frequency range	DC - 4 kHz
Voltage, max.	150 V
Current, max.	600 A
Load resistance	1 Ohm
Input voltage	2.5/5/10 V
Distortion	< 0.7 %
Signal to noise ratio	> 90 dB
Field voltage, max.	112 V
Field current, max.	100 A
Weight	850 kg (1873.9 lb)
Size (WxHxD)	1200 x 1800 x 800 mm (47.3 x 70.9 x 31.5 in)

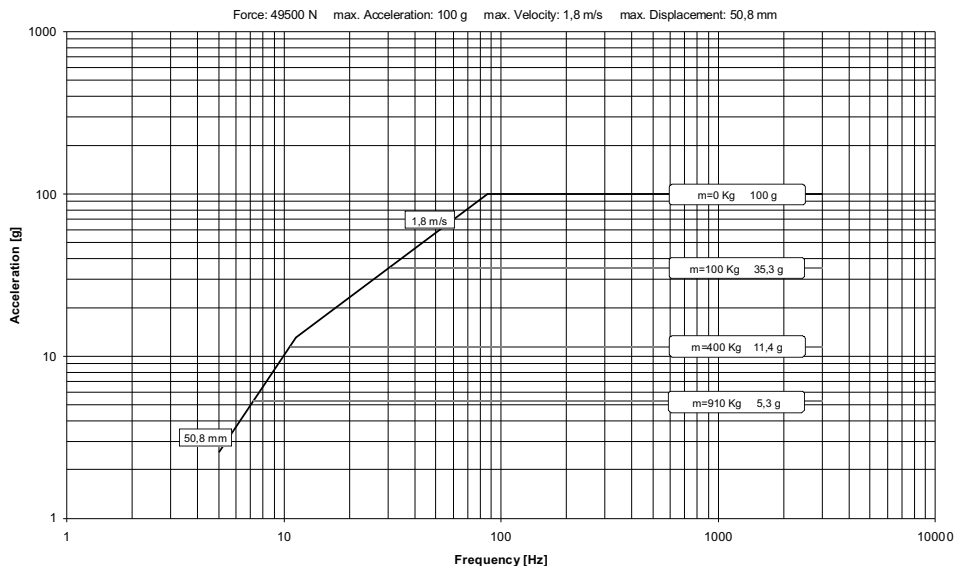
TECHNICAL SPECIFICATION VIBRATION GENERATOR S 59349/*-440

Rated peak force (N lbf)	Sine/Random/Shock	49500/49500/99000	11128/11128/22256
Frequency range (Hz)		5-3000	5-3000
Max. rated travel (mm inch)	Pk-Pk	50.8**	2.0**
Max. velocity (m/sec inch/sec)	Sine/Random/Shock	1.8/1.8/2.5	71/71/98
Max. acceleration (g)	Sine/Random/Shock	100/100/224	100/100/224
Max. power consumption at 400 V (kVA)		40	40
Nominal impedance (Ohm)		0.3	0.3
Suspension stiffness (N/mm lbf/inch)		200	1142
Max. weight tested (kg lb)		910	2006
Effective moving mass (kg lb)		43.0	94.8
Main resonance frequency (Hz)		>2100	>2100
Weight with trunnion (kg lb)	AIT/LB	4350/3350	9590/7385
Stray magnetic field (mT)	without/with degauss kit	<20/<1	<20/<1
Armature (ø/mm ø/inch)		440	17.3
Cooling (m ³ /h ft ³ /min)		4200	2472
Interlocks	Temperature, overtravel, airflow, overcurrent, compressed air		

*AIT or LB
**Optionally 3" displacement

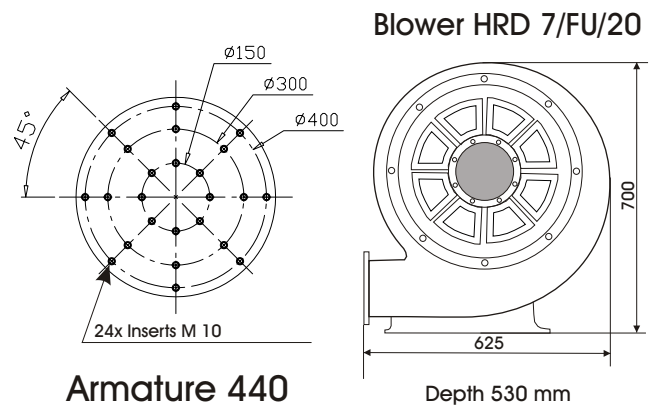
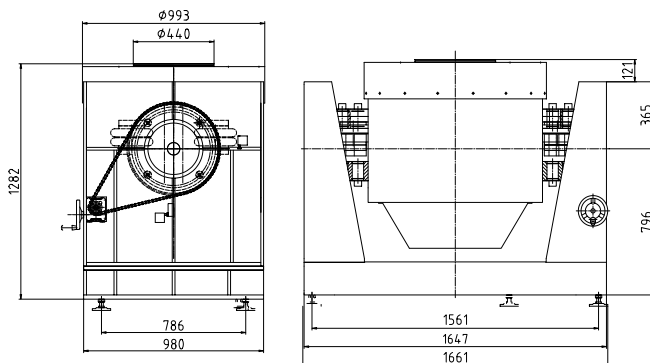
PERFORMANCE DIAGRAM

System Performance TV 59349/*- 440



DIMENSIONS (mm)

S 59349/AIT-440 (Example drawing)



Subject to modifications