

Vibration Test System TV 51010/LS-340

DESCRIPTION

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

Sine, random, mixed-mode, and shock tests can be carried out under lab conditions, using complete vibration testing systems. These systems are indispensable for 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 is pivotally mounted in a rugged frame and enables the excitation in vertical and horizontal direction.

A built-in automatic, pneumatic operated load compensation system allows the realization of the nominal vibration displacement, even with heavy test loads.

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).



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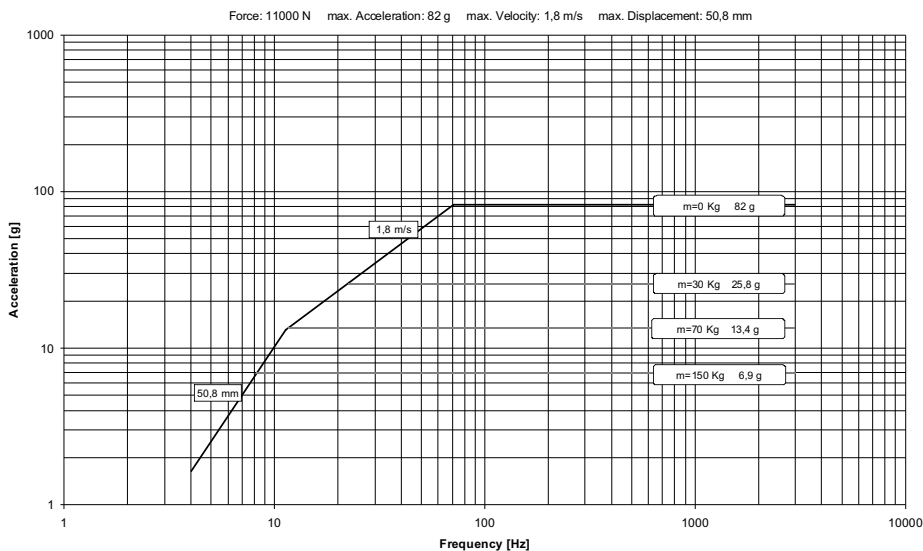
KVA ratings	16000 VA
Frequency range	DC-4 kHz
Voltage, max.	105 V
Current, max.	150 A
Load resistance	1 Ohm
Input voltage	2.5/10 V
Distortion	< 0.7 %
Signal to noise ratio	> 90 dB
Field voltage, max.	140 V
Field current, max.	8 A
Weight	380 kg (837.8 lb)
Size (WxDxH)	600 x 1800 x 800 mm (23.6 x 70.9 x 31.5 in)

TECHNICAL SPECIFICATION VIBRATION GENERATOR S 51010/LS-340

Rated peak force (N lbf)	Sine/Random/Shock	11000/11000/22000	2473/2473/4946
Frequency range (Hz)		DC-3000	DC-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	82/82/167	82/82/167
Max. power consumption at 400 V (kVA)		11	11
Nominal impedance (Ohm)		0.5	0.5
Suspension stiffness (N/mm lbf/inch)		75	428.3
Max. weight tested (kg lb)		150	330.7
Effective moving mass (kg lb)		13.4	29.5
Main resonance frequency (Hz)		>2500	>2500
Weight with trunnion (kg lb)		1450	3196.7
Stray magnetic field (mT)	without/with degauss kit	<8.5/<0.5	<8.5/<0.5
Armature (∅/mm ∅/inch)		340	13.39
Cooling (m³/h ft³/min)		500	294
Interlocks	Temperature, overtravel, airflow, overcurrent, compressed air		

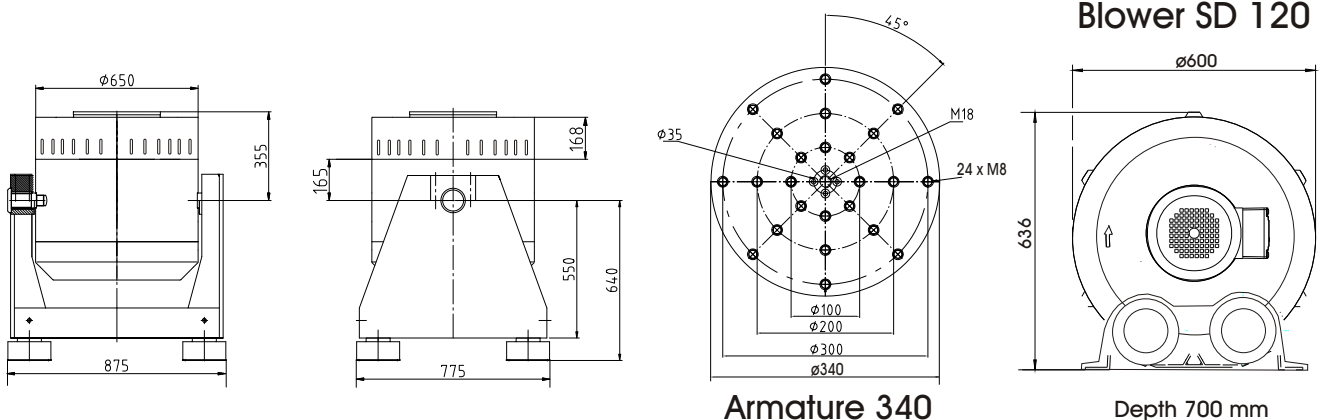
PERFORMANCE DIAGRAM

System Performance TV 51010/LS-340



DIMENSIONS (mm)

S 51010/LS-340 (Example drawing)



Armature 340

Depth 700 mm

Subject to modifications