

Vibration Test System TV 56280/LS-180



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.

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.

An automatic, pneumatic operated load compensation allows the realization of the nominal vibration displacement, even with heavy test loads. The frame is equipped with air isolation mounts according to standard. The transmission of vibrations onto the place of erection is reduced to a minimum; an additional foundation (seismic mass) is not required in most cases. A maintenance-free blower guarantees the cooling of the shaker. The cooling air is sucked in via a filtersystem.

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).

AMPLIFIER A 1 02 1 015

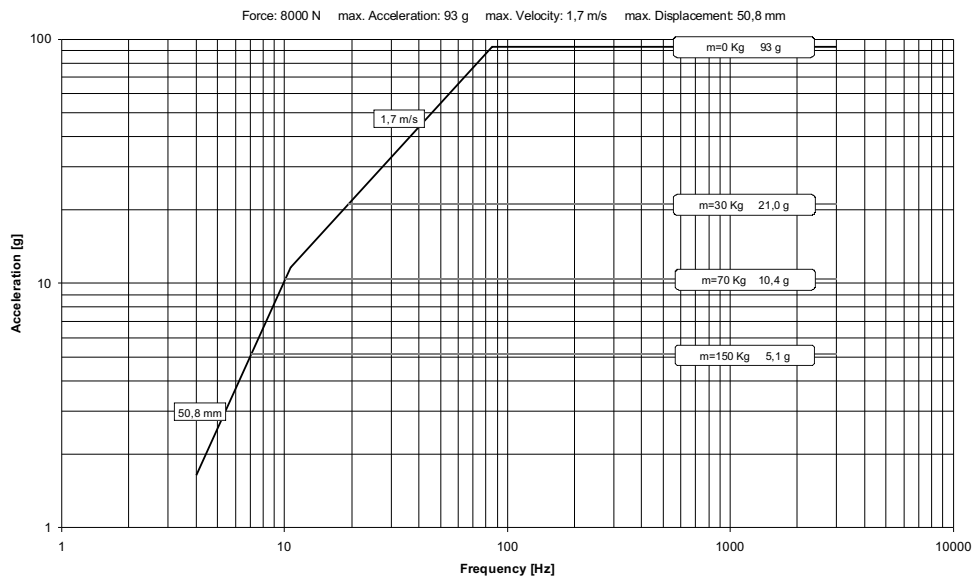
KVA ratings	16000 VA
Frequency range	DC - 4 kHz
Voltage, max.	105 V
Current, max.	150 A
Load resistance	1 Ohm
Input voltage	2.5/5/10 V
Distortion	<0.7 %
Signal to noise ratio	> 90 dB
Field voltage, max.	280 V
Field current, max.	6 A
Weight	360 kg (793.7 lb)
Size (WxHxD)	600 x 1800 x 800 mm (23.6 x 70.9 x 31.5 in)

TECHNICAL SPECIFICATION VIBRATION GENERATOR S 56280/LS-180

Rated peak force (N lbf)	Sine/Random/Shock	8000/8000/16000	1798/1798/3597
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	1.7/1.7/2.5	67/67/98
Max. acceleration (g)	Sine/Random/Shock	93/93/186	93/93/186
Max. power consumption at 400 V (kVA)		14	14
Nominal impedance (Ohm)		0.5	0.5
Suspension stiffness (N/mm lbf/inch)		50	285.5
Max. weight tested (kg lb)		150	330.7
Effective moving mass (kg lb)		8.8	19.4
Main resonance frequency (Hz)		>3000	>3000
Weight with trunnion (kg lb)		900	1984.2
Stray magnetic field (mT)	without/with degauss kit	<8.5/<0.5	<8.5/<0.5
Armature (∅/mm ∅/inch)		180	7.09
Cooling (m³/h ft³/min)		500	294
Interlocks	Temperature, overtravel, airflow, overcurrent, compressed air		

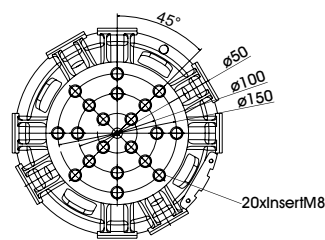
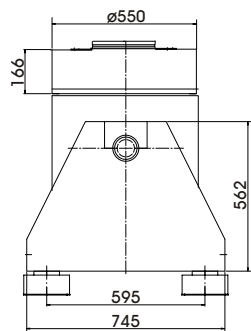
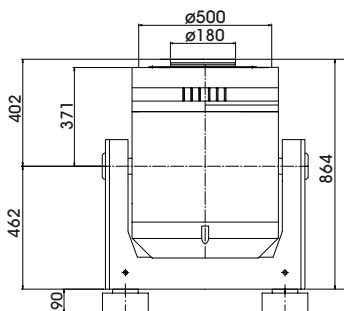
PERFORMANCE DIAGRAM

System Performance TV 56280/LS-180

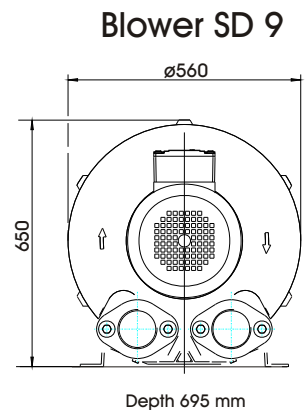


DIMENSIONS (mm)

S 56280/LS-180 (Example drawing)



Armature 180



Blower SD 9

Subject to modifications