TIRA Schwingtechnik
Vibration Test Systems

Vibration Test System
TV 54216-130

DESCRIPTION

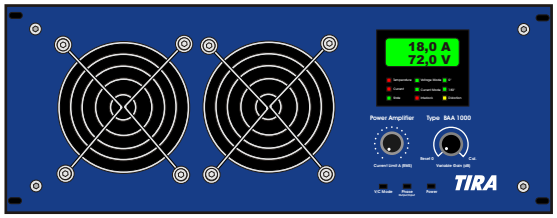
TIRA shakers reproduce vibration environment under laboratory conditions for testing the dynamic strength and the reliability in all fields of vibration testing.

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 BAA 1000-E

KVA ratings	1200 VA
Frequency range	2 Hz - 20 kHz
Voltage, max.	72 V
Current, max.	18 A
Load resistance	4 Ohm
Input voltage	< 5 V
Distortion	< 0.1 %
Signal to noise ratio	> 90 dB
Field voltage, max.	70 V
Field current, max.	3,2 A
Weight	72 kg (158.7 lb)
Size (WxHxD)	483 x 320 x 600 mm (19 x 12.6 x 23.6 in)

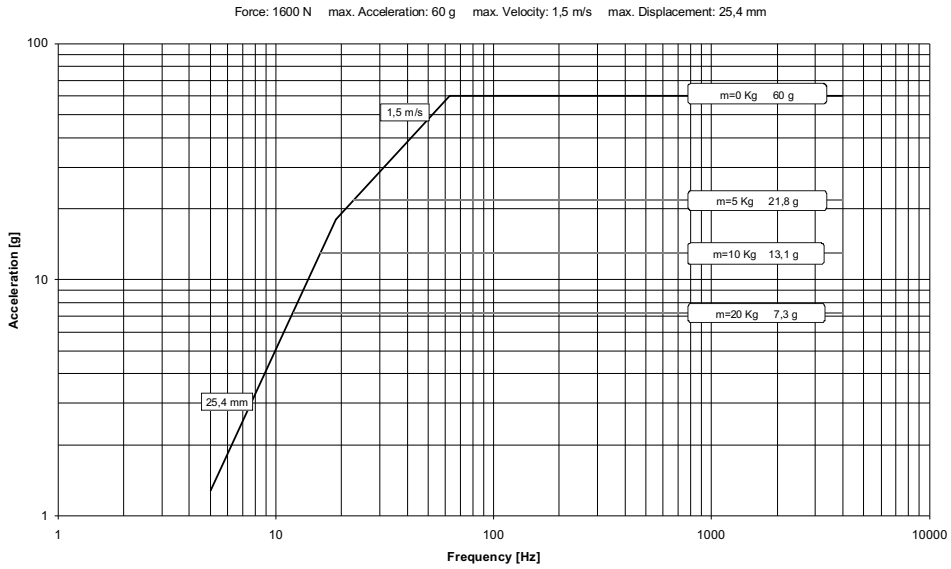


TECHNICAL SPECIFICATION VIBRATION GENERATOR S 54216-130

Rated peak force (N|lbf)	Sine/Random/Shock	1600/1000/2000	360/225/450
Frequency range (Hz)		DC-4000	DC-4000
Max. rated travel (mm|inch)	Pk-Pk	25.4	1.0
Max. velocity (m/sec|inch/sec)	Sine/Random/Shock	1.5/1.5/2.0	59/59/79
Max. acceleration (g)	Sine/Random/Shock	60/40/80	60/40/80
Max. power consumption at 230 V (kVA)		2.3	2.3
Nominal impedance (Ohm)		4	4
Suspension stiffness (N/mm|lbf/inch)		22	125.6
Max. weight tested (kg|lb)		20	44.1
Effective moving mass (kg|lb)		2.5	5.5
Main resonance frequency (Hz)		>3500	>3500
Weight with trunnion (kg|lb)		188	414.5
Stray magnetic field (mT)	without/with degauss kit	<8.5/<0.5	<8.5/<0.5
Armature (ø/mm|ø/inch)		130	5.12
Cooling (m^3/h|ft^3/min)		80	47
Interlocks	Temperature, overtravel, airflow, overcurrent, compressed air		

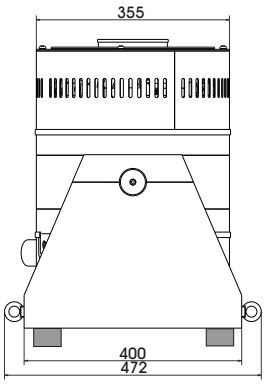
PERFORMANCE DIAGRAM

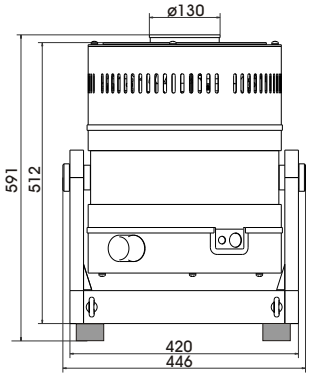
System Performance TV 54216-130

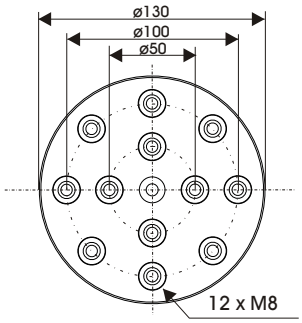


DIMENSIONS in mm

S 54216-130 (Example drawing)

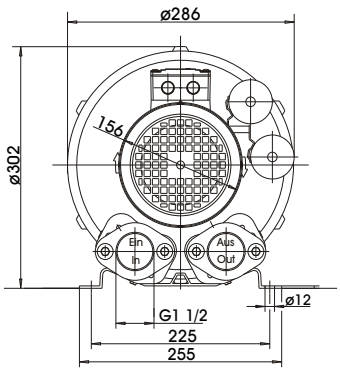






Armature 130

Blower SB 0140



Depth 292

Subject to modifications

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