

# Vibration Test System TV 51120



## DESCRIPTION

TIRA permanent magnet shakers are applicable as portable and stationary systems for reproducing environmental effects.

Typical fields of applications are modal excitation and analyses, structural testing, calibration of sensors and testing of small components. The rugged design of the shakers guarantees their long operating life. TIRA shakers stand for such features like a high lateral and axial stiffness.

TIRA have realized the light-weight design of shakers required by the industry. New rare-earth magnets replace the alnico magnets used up to now. Thus, a weight reduction from 30 kg (66 lb) to 10 kg (22 lb) could be achieved which enables an easy shaker-handling especially for mobile applications as "one man" excitation source.

These shakers have turned out to be outstanding in fields of applications such as environmental laboratories, universities and industrial production lines for testing components and for in-house calibration. This line of shakers enables the user to carry out tests in accordance with national and international standards such as DIN, ISO, BS, MIL, IEC ...

## 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 (19 x 3.5 x 17.7 in)



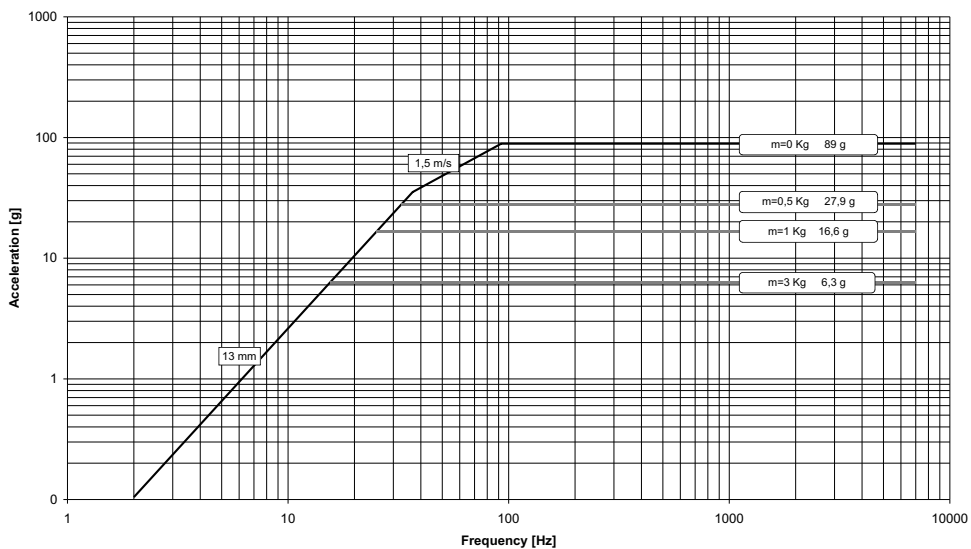
# TECHNICAL SPECIFICATION VIBRATION GENERATOR S 51120

Rated peak force (N   lbf)	Sine/Random	200/140	44/31
Frequency range (Hz)		2-7000	2-7000
Max. rated travel (mm   inch)	Pk-Pk	13	0.51
Max. velocity (m/sec   inch/sec)	Sine/Random	1.5/1.5	59/59
Max. acceleration (g)	Sine/Random	89/62	89/62
Max. power consumption at 230 V (kVA)		0.35	0.35
Nominal impedance (Ohm)		4	4
Suspension stiffness (N/mm   lbf/inch)		8	45.7
Effective moving mass (kg   lb)		0.23	0.507
Max. weight tested (kg   lb)		3.0	6.6
Main resonance frequency (Hz)		> 6500	> 6500
Weight with trunnion (kg   lb)		12	26.4
Armature (ø/mm   ø/inch)		60	2.36
Cooling (m <sup>3</sup> /h   ft <sup>3</sup> /min)		40	24

## PERFORMANCE DIAGRAM

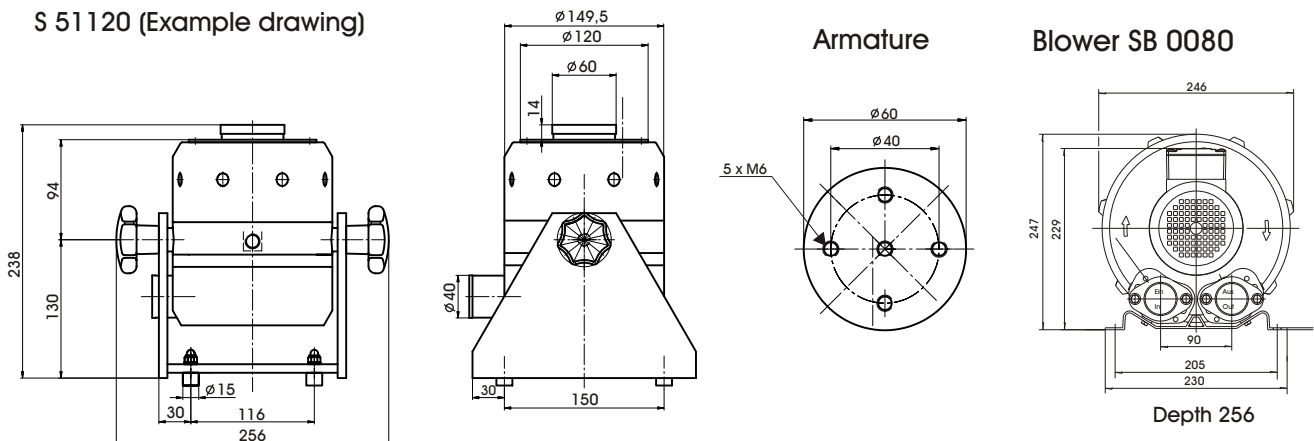
### System Performance TV 51120

Force: 200 N max. Acceleration: 89 g max. Velocity: 1.5 m/s max. Displacement: 13 mm



## DIMENSIONS (mm)

S 51120 (Example drawing)



Subject to modifications

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