

TIRAvib

Vibration generator

TIRAvib 50101

TIRAvib 5220



- Model TV 50101: 650 N, 66.2 kgf
- Model TV 5220: 1000 N, 102 kgf
- automatic load compensation

DESCRIPTION

The vibration generators, TV 50101 and TV 5220, reproduce environmental conditions over a very wide frequency band.

The vibration generator operates in sine, random and shock mode under controlled conditions. Several features make the vibration generators an ideal testing instrument for use in the field of quality assurance and R&D in laboratories.

TIRA vibration generators are designed for continuous operation. They are fitted with a light weight rugged magnesium armature and a tested and proven suspension system which provides excellent lateral and rotational restraint as well as axial stiffness.

A unique pneumatic load support system guarantees a full nominal displacement with a maximum permitted vertical load of 25 kg. Several optional features, such as external load supports and horizontal oil film slip tables, make the TV 50101/5220 vibration generator universal even to test objects of large dimensions in three axis.

The digital power amplifiers are provided with protection interlocks which guarantee the rated performance of the complete system.

Digital Vibration Control systems offer the user sophisticated, powerful DSP hardware with a full range of sine, random, shock and mixed mode software complete with a graphical display unit.

TIRA's fully equipped package enables customers to test under all national and international standards such as DIN, ASTM, BS, MIL, IEC, etc...

POWER AMPLIFIER

FOR TIRAvib 50101

sine continuous rating 1000 VA
voltage 90 V
current 11.2 A
distortion < 0.1 %
weight 50 kg
size (WxHxD) 483x300x500mm

FOR TIRAvib 5220

sine continuous rating 1000 VA
voltage 90 V
current 11.2 A
distortion < 0.1 %
weight 50 kg
size (WxHxD) 483x300x500mm

PNEUMATIC RECENTERING



STANDARD SUPPLY

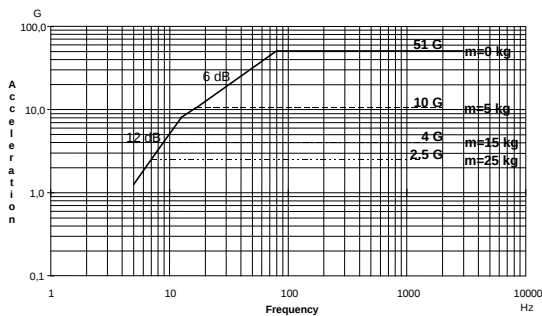
- Automatic Load compensation - pneumatic compressed air requirement 0.6 Mpa
- Air isolation-natural frequency < 6 Hz
- Air filter
- Trunnion with high mobility (180°)
- Cooling blower

Technical Specification

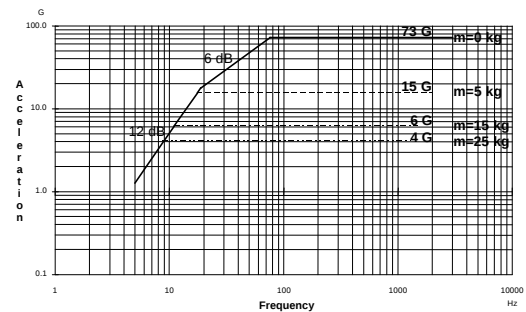
		TIRAvib 50101	TIRAvib 5220
Rated peak force [N]	Sine/Random/Shock	650 / 420 / 840	1000 / 650 / 1300
Frequency range [Hz]		DC-7000	DC-7000
Max. rated travel [mm]		25.4 *	25.4 *
Max. Velocity [m/s]	Sine/Random/Shock	1.5 / 1.5 / 2.0	1.5 / 1.5 / 2.0
Max acceleration [g]	Sine/Random/Shock	51 / 33 / 62	73 / 47 / 95
Rated current [A]		11.2	11.2
Nominal impedance [W]		8	8
Suspension stiffness [N/mm]		22	22
Effective moving mass [kg]		1.3	1.4
Max. test load [kg]		25	25
Main resonance frequency [Hz]		> 5000 Hz	> 5200 Hz
Weight with trunnion [kg]		80	80
Stray magnetic field [mT] (150 mm above table)	without/with degauss kit	< 8.5 / < 0.5	< 8.5 / < 0.5
Cooling [m³/h]		140	140
Interlocks		Temperature Overtravel Airflow	Temperature Overtravel Airflow

* Increased displacements available on request

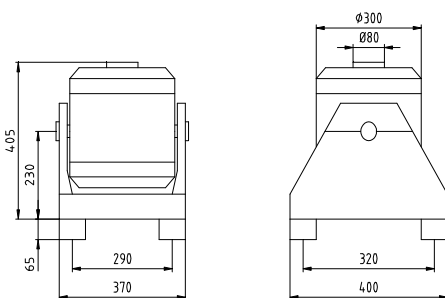
PERFORMANCE DIAGRAM TV 50101



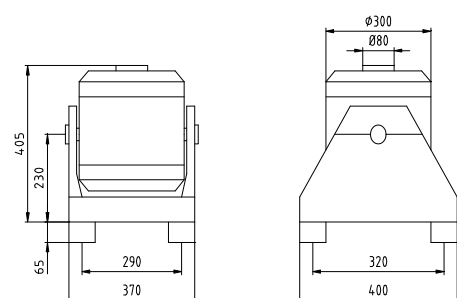
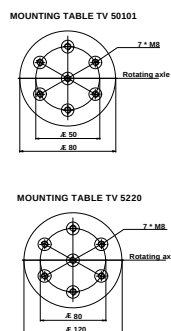
PERFORMANCE DIAGRAM TV 5220



DIMENSIONS



TV 50101



TV 5220

MANUFACTURER



- ◆ MEASURING
- ◆ TESTING
- ◆ BALANCING
- ◆ CNC

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PRODUCT RANGE

- Shaker 9 N - 245 kN
- Servohydraulic up to 1000 kN
- Longstroke systems up to 600 mm
- Amplifier, digital / analog
- Modal shaker
- Vibrations control system
- Sine, Random, Shock, Mixed mode
- Oil film slip table for horizontal test
- Climate and temperature system
- Headexpander and special construction