

# TIRAvib

## Vibration generator

TIRAvib 5550  
TIRAvib 5550/LS



- **Model TV 5550:**  
Sine:4000 N (408 kgf); Random:2000 N (204 kgf);  
Shock: 4000 N (408 kgf); Displacement: 25.4mm
- **Model TV 5550/LS:**  
Sine:4000 N (408 kgf); Random:4000 N (408 kgf);  
Shock: 8000 N (815 kgf); Displacement: 50.8mm
- **automatic load compensation**
- **air cooled**

### DESCRIPTION

The vibration generators TV 5550 and TV 5550/LS 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 100 kg. Several optional features, such as external load supports and horizontal oil film slip tables, make the TV 5550 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.

The LS version of the generator enables Shock-testing of up to 51 mm displacement to be carried out.

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

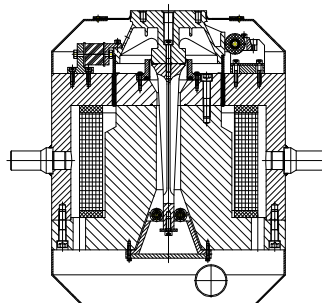
#### FOR TIRAvib 5550

sine continuous rating 6000 VA  
voltage 110 V  
current 55 A  
distortion < 1 %  
weight 100 kg  
size (WxHxD) 600x1600x850mm

#### FOR TIRAvib 5550/LS

sine continuous rating 12000 VA  
voltage 110 V  
current 110 A  
distortion < 1 %  
weight 110 kg  
size (WxHxD) 600x1600x850mm

### PNEUMATIC RECENTERING



### STANDARD SUPPLY

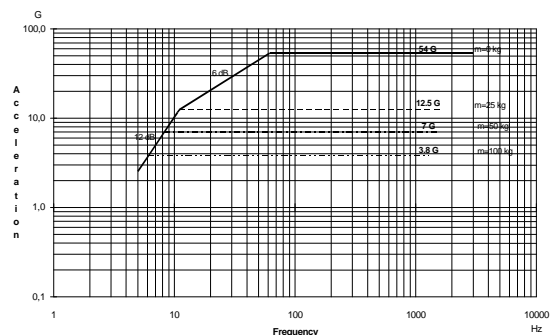
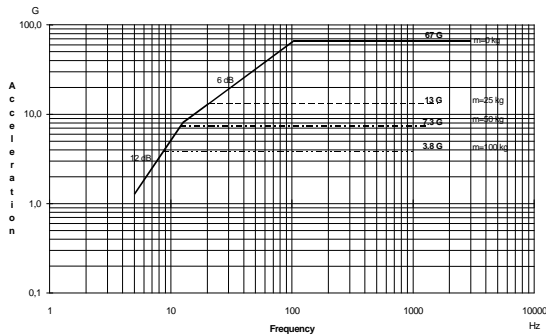
- Automatic Load compensation - pneumatic compressed air requirement 0.6 Mpa
- Air isolation-natural frequency < 6 Hz
- Air filter
- Trunnion with high mobility (180°)
- Cooling blower

# Technical Specification

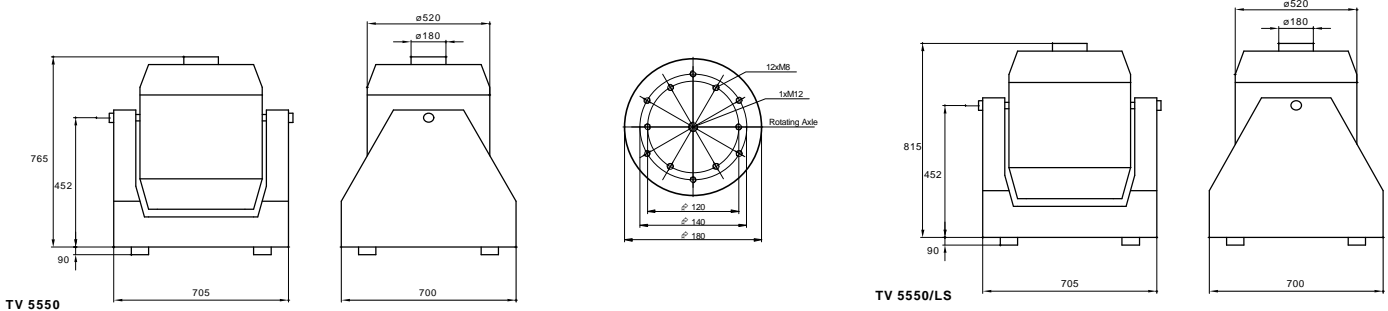
		TIRAvib 5550	TIRAvib 5550/LS
Rated peak force [N]	Sine/Random/Shock	4000 / 2000 / 4000	4000 / 4000 / 8000
Frequency range [Hz]		DC-3000	DC-3000
Max. rated travel [mm]		25.4	50.8
Max. velocity [m/s]	Sine/Random/Shock	1.0 / 1.0 / 1.7	1.7 / 1.7 / 2.5
Max. acceleration [g]	Sine/Random/Shock	67 / 33 / 67	54 / 54 / 108
Rated current [A]		55	90
Nominal impedance [W]		0.9	0.9
Suspension stiffness [N/mm]		65	50
Effective moving mass [kg]		6.1	7.5
Max. test load [kg]		100	100
Main resonance frequency [Hz]		> 3000	> 3000
Weight with trunnion [kg]		750	750
Stray magnetic field [mT] (150 mm above table)	without/with degauss kit	< 8.5 / < 0.5	< 8.5 / < 0.5
Cooling [m³/h]		340	510
Interlocks		Temperature Overtravel Airflow	Temperature Overtravel Airflow

## PERFORMANCE DIAGRAM TV 5550

## PERFORMANCE DIAGRAM TV 5550/LS



## DIMENSIONS



## 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