TIRA Schwingtechnik
Vibration Test Systems

Modal Vibration Test System TV 55240-M/LSS

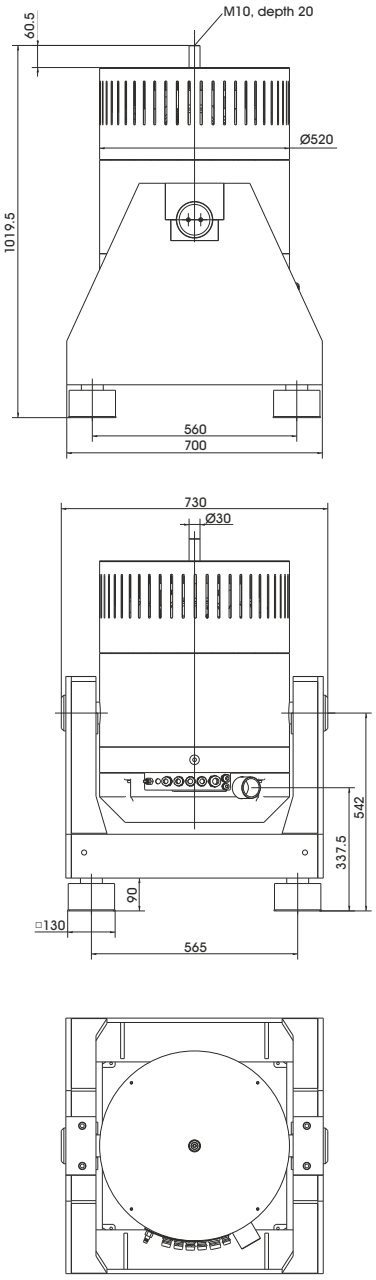
TECHNICAL PARAMETERS Modal exciter S 55240-M/LSS

Rated peak force $Sine_{pk}$/$Random_{RMS}$ [1]	4000/3400 N
Frequency range	1 - 2000 Hz
Main resonance frequency (free-swinging)	>2500 Hz
Max. displacement Peak-Peak [2]	100 mm
Max. velocity	2.0 m/s
Suspension stiffness	electronically adjustable
Effective moving mass (±5%)	11.0 kg
Total mass	800 kg
Coupling thread	M10
Interlocks	Temperature, displacement, cooling air, overcurrent



1) Random force according to ISO 5344:2004
2) only with foundation mounting
For long-term tests, the load must be reduced to 80 %. Continuous operation at maximum load can cause damage.

S 55240-M/LSS (Example drawing) Dimensions in mm



SCOPE OF DELIVERY, OPTIONS AND FEATURES OF THE SYSTEM

Scope of delivery:
- Modal exciter
- Trunnion mount
- Power amplifier
- Cooling blower
- Connection cables (each 5 m)
- Power cables (5 m)
  for amplifier (CEE 32 connector)
- Blower hose ø60 mm (5 m)

Options:
- Wheels&Rails (incl. 3m rails)
- Squeak&Rattle (Silent operation without blower)
- Remote control (Software)
- ASM-Mode (Auto Shutdown Manager)
- Silencer
  for cooling blower (Noise reduction up to 6 dB(A))
- Acoustic enclosure
  for cooling blower (Noise reduction 15 - 23 dB(A))
- Cable extension
- Factory acceptance test

Options:

TIRA EMS Energy Management System

- Operation with temperature-controlled cooling blower (and optional with variable field strength)

Features:
- Vibration isolation < 6 Hz
- Coarse filter unit
- Fully automatic pneumatic load compensation
- Electronic zero point regulation with adjustable stiffness
- Automatic centering of the armature
- Made in Germany
- Servicehotline

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Subject to modifications

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TECHNICAL PARAMETERS Amplifier Chameleon-T

Max. output power$_{RMS}$ (factory-set)	15000 VA
Frequency range	DC - 5 kHz
Voltage$_{RMS}$, max.	212 V
Current$_{RMS}$, max. (factory-set)	40-100 A
Signal input voltage$_{PK}$	±10 V
Total Harmonic Distortion (THD, at 70A$_{RMS}$, 200 Hz)	< 0.2 %
Signal to noise ratio	> 85 dB
Field voltage (factory-set)	140-280 V
Field current (factory-set)	6-8 A
Total mass	330 kg
Dimensions (WxHxD)	600 x 1740 x 800 mm
Power supply (Standard)	3~ / N / PE 400 V±5% 50 Hz, CEE 32
Recommended fuse protection	32 A slow
Max. power consumption at 400 V (incl. blower)	17 kVA
Interlocks:	Overload, Temperature, Displacement, Cooling air, Phase monitoring, Emergency stop

Features:
Field supply integrated
Field voltage/Field current variable
according to customer spec.
4 Sigma peak current
Electronic zero-point-regulation (TMC)
Mains switch and integrated line filter
Color Touch Screen

TECHNICAL PARAMETERS Cooling blower TB 0310

Volume flow rate	max. 315 m³/h
Total pressure difference	max. 290 mbar
Power	4 kW
Frequency	50 Hz
Hose diameter	60 mm
Hose length (Std.)	5 m
Total mass	42 kg
Dimensions (WxHxD)	382 x 384 x 432 mm
Sound pressure level, max.	max. 69 dB(A)
Power supply (standard)	by amplifier rack
Max. current consumption at 400 V	7.2 A

Options:
Silencer TB 0310-SI (Noise reduction up to 6 dB(A))
Dimensions (LxD): 308 x 82 mm
Mass: 0.58 kg
Acoustic enclosure TB 0310-AE (Noise reduction 15 - 23 dB(A))
Dimensions (WxHxD): 650 x 760 x 860 mm
Mass: 55 kg
Hose length according to customers request (up to 10 m)





Cooling blower TB 0310



Silencer TB 0310-SI
(optional)



Acoustic enclosure TB 0310-AE
(optional)

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