# Vibration Test System TV 59335/*-640

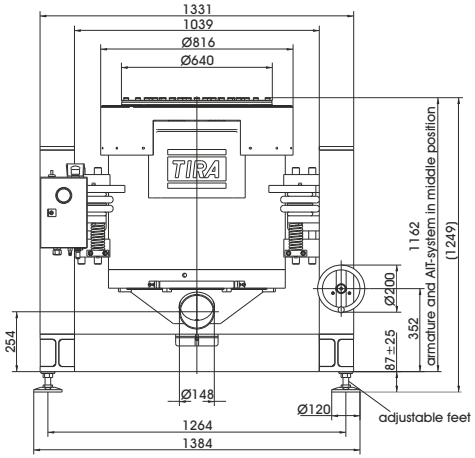
S 59335/AIT-640 (Example drawing) Dimensions in mm

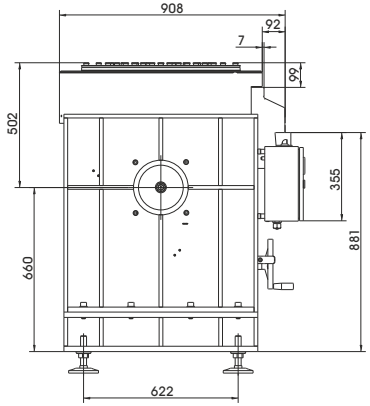
## TECHNICAL PARAMETERS Vibration exciter S 59335/*-640

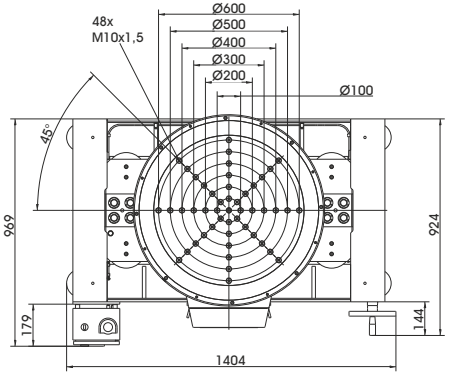
| | |
|---|---|
| Rated peak force Sine$_{pk}$/Random$_{RMS}$[1]/Shock$_{pk}$[2] | 35000/32000/105000 N |
| Frequency range | 5 - 2000 Hz |
| Main resonance frequency | 2000 Hz |
| Max. displacement Peak-Peak | 50.8 mm |
| Max. velocity Sine$_{pk}$/Random$_{RMS}$/Shock$_{pk}$ | 2.0/1.8/3.0 m/s |
| Max. acceleration Sine/Random/Shock | 70/63/160 g |
| Suspension stiffness | 150 N/mm |
| Effective moving mass | 40.5 kg |
| Max. payload | 610 kg |
| Total mass with trunnion RIT/AIT/LB* | 2350/2700/2250 kg |
| Magn. stray field std./low degaussing[3] | <2/<1 mT |
| Armature diameter | 640 mm |
| Required compressed air supply (load-dependent) | 600-1000 kPa |
| Interlocks | Temperature, displacement, cooling air, overcurrent, compressed air |

1) System specified according to ISO 5344:2004
2) Theoretical maximum shock value. Depends on payload, amplifier, shock and shock width
3) measured at 150 mm above armature inserts
For long-term tests, the load must be reduced to 80 %. Continuous operation at maximum load can cause damage.
* RIT, AIT or LB (explanation see TIRA selection guide page 7)




## SCOPE OF DELIVERY, OPTIONS AND FEATURES OF THE SYSTEM

Scope of delivery:
- Vibration exciter
- Trunnion mount (AIT, RIT or LB)*
- Power amplifier
- Cooling blower with frequency converter
- Connection cables (each 10 m)
- Power cables (each 10 m)
  - for amplifier (CEE 63 connector) and
  - cooling blower (CEE 32 connector)
- Blower hose ø150 mm (5 m)
- Compressed-air hose NW 7,2 (Standard) (5 m)

Options:
- Different hole pattern of armature
  - (different pitch diameter and/or thread inserts)
  - at customers request
- AIT-trunnion mount
  - with integrated vibration isolation
- RIT-trunnion mount
- LB-frame

Options:
- Low degaussing kit to further reduce stray magnetic field
- Squeak&Rattle (Silent operation without blower)
- Wheels&Rails (incl. 3m rails)
- Airglide-option (Shaker movable on air cushions)
- Thermobarrier (-40°C to +140°C)
- Chamber leadthrough
- Climatic chamber support kit
- Remote control (Software)
- ASM-Mode (Auto Shutdown Manager)
- Silencer
  - for cooling blower (Noise reduction 9 - 15 dB(A))
- Acoustic enclosure
  - for cooling blower (Noise reduction 5 - 23 dB(A))
- Water-cooled acoustic enclosure
  - for cooling blower (Noise reduction 30 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 < 3 Hz (AIT)
  < 6 Hz (RIT;LB)
- Coarse filter unit
- Fully automatic pneumatic load compensation
- AIT fixable
- Automatic centering of the AIT-System and the armature
- Degauss kit to reduce stray magnetic field
- Made in Germany
- Servicehotline

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Subject to modifications

TIRA Vibration Test Systems TV 59335/*-640

# Vibration Test System TV 59335/*-640

## TECHNICAL PARAMETERS Amplifier Octopus 63

| | |
|---|---|
| Output power, max. | 30000 VA |
| Frequency range | DC - 5 kHz |
| Voltage$_{RMS}$, max. | 212 V |
| Current$_{RMS}$, max. | 300 A |
| Signal input voltage$_{PK}$ | ±10 V |
| Total Harmonic Distortion (THD, at 70A$_{RMS}$, 200 Hz) | < 0.2 % |
| Signal to noise ratio | > 85 dB(A) |
| Field voltage | 105 V |
| Field current | 75 A |
| Total mass | 670 kg |
| Dimensions (W x H x D) | 1200 x 1800 x 800 mm |
| Power supply (Standard) | 3~ / N / PE 400 V±5% 50 Hz, CEE 63 |
| Recommended fuse protection (Standard) | 63 A slow |
| Max. power consumption at 400 V | 32 kVA |
| Interlocks: | Overload, Temperature, Displacement, Cooling air, Compressed air, Phase monitoring, Emergency stop |

Features:
Field supply integrated
Mains switch and integrated line filter
Lo-Field/Hi-Field (Energy-saving mode)
Field voltage/Field current variable
according to customer spec.
4 Sigma peak current
Color Touch Screen

## TECHNICAL PARAMETERS Cooling blower TB 7/FUK/11

| | |
|---|---|
| Max. volume flow rate | 1920 m³/h |
| Max. total pressure difference | 16 kPa |
| Motor output | 11 kW |
| Max. frequency | 105 Hz |
| Hose diameter | 150 mm |
| Hose length (Std.) | 5 m |
| Total mass | 113 kg |
| Dimensions (W x H x D) | 625 x 775 x 602 mm |
| Max. sound pressure level | 102 dB(A) |
| | |
| Switch box (fixation to wall): | |
| Mass | 10 kg |
| Dimensions (W x H x D) | 300 x 300 x 250 mm |
| Power supply (variable) | 3~ / PE 400 V±5% 50 Hz, CEE 32 |
| Recommended fuse protection (Standard) | 32 A slow |
| Max. current consumption at 400 V | 25 A |

Options:
Silencer TB 7/FUK-SI (Noise reduction 9 - 15 dB(A))
Dimensions (L x D): 1120 x 280 mm
Mass: 9.2 kg
Acoustic enclosure TB 7/FUK-AE (Noise reduction 5 - 23 dB(A))
Dimensions (W x H x D): 1250 x 1393 x 1470 mm
Mass: 103 kg
Water-cooled acoustic enclosure WWT (Noise reduction 30 dB(A))
Dimensions (W x H x D): 1500 x 2080 x 1200 mm
Mass: 800 kg
Hose length according to customers request (up to 10 m)





Switch box (blower)


Cooling blower TB 7/FUK/11


Silencer TB 7/FUK-SI (optional)


Acoustic enclosure TB 7/FUK-AE (optional)

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