Vibration Test System TV 59327/*-640

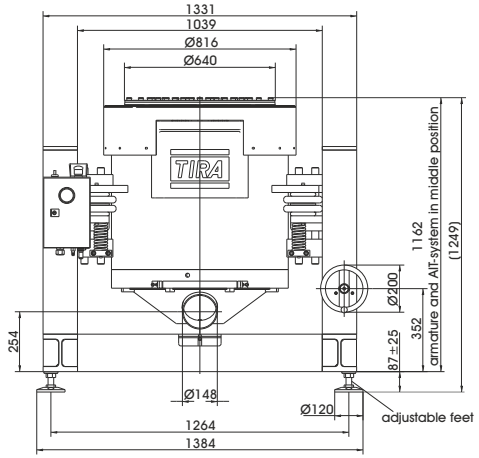
TECHNICAL PARAMETERS Vibration exciter S 59327/*-640

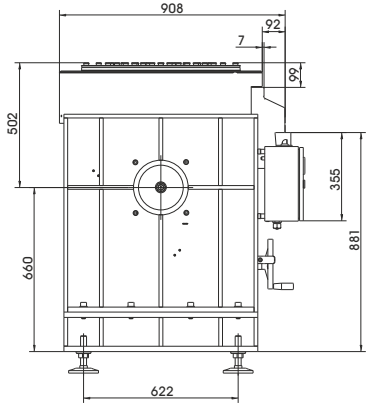
Rated peak force Sine$_{pk}$/Random$_{RMS}$ [1]/Shock$_{pk}$ [2]	27000/27000/80000 N
Frequency range	5 - 2000 Hz
Main resonance frequency	> 1900 Hz
Max. displacement Peak-Peak	50.8 mm
Max. velocity Sine$_{pk}$/Random$_{RMS}$/Shock$_{pk}$	2.0/1.8/3.0 m/s
Max. acceleration Sine/Random/Shock	66/50/131 g
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

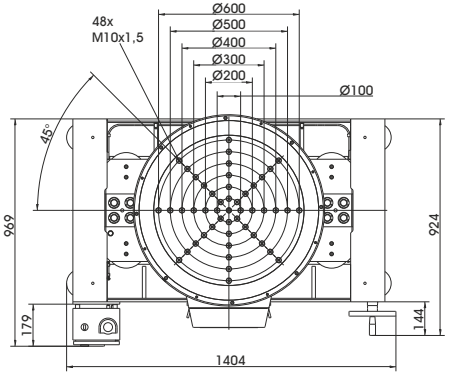
1) System specified according to ISO 5344:2004
2) Theoretical maximum shock value. Depends on payload, amplifier, shock and shock width
3) measured at 150 mm above armature inserts
For long-term tests, the load must be reduced to 80 %. Continuous operation at maximum load can cause damage.
* RIT, AIT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



S 59327/AIT-640 (Example drawing) Dimensions in mm







SCOPE OF DELIVERY, OPTIONS AND FEATURES OF THE SYSTEM

Scope of delivery:
Vibration exciter
Trunnion mount (AIT, RIT or LB)*
Power amplifier
Cooling blower
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

TIRA GmbH Eisfelder Str. 23/25, 96528 Schalkau, Germany • Phone: +49 36766 280-0 • Fax: +49 36766 280-99 • Internet: www.tira-gmbh.de • Email: st@tira-gmbh.de

© TIRA GmbH • Version 13 - 2026-09-16
Subject to modifications

TIRA Vibration Test Systems TV 59327/*-640

Vibration Test System TV 59327/*-640

TECHNICAL PARAMETERS Octopus 42L

Output power, max.	23000 VA
Frequency range	DC - 5 kHz
$Voltage_{RMS}$, max.	212 V
$Current_{RMS}$, max.	200 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	650 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)	50 A slow
Max. power consumption at 400 V	30 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 m^3/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)




Frequency converter (enclosure)


Cooling blower TB 7/FUK/11


Silencer TB 7/FUK-SI (optional)


Acoustic enclosure TB 7/FUK-AE (optional)

TIRA GmbH Eisfelder Str. 23/25, 96528 Schalkau, Germany • Phone: +49 36766 280-0 • Fax: +49 36766 280-99 • Internet: www.tira-gmbh.de • Email: st@tira-gmbh.de

© TIRA GmbH • Version 13 - 2026-09-16

Subject to modifications