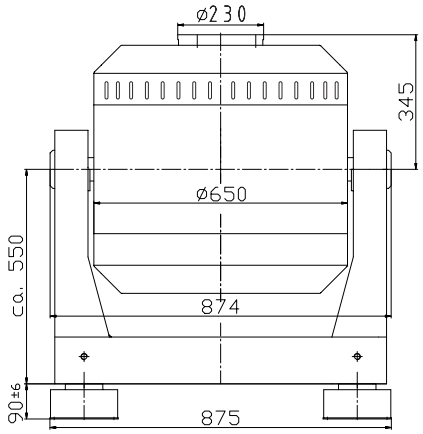
Vibration Test System TV 51010/LS-230

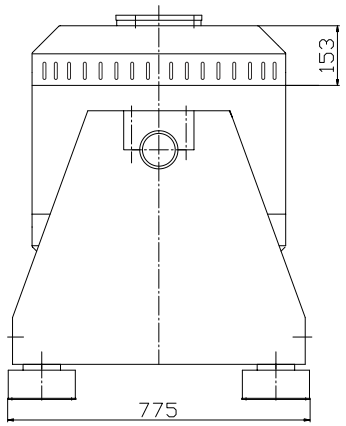
TECHNICAL PARAMETERS Vibration exciter S 51010/LS-230

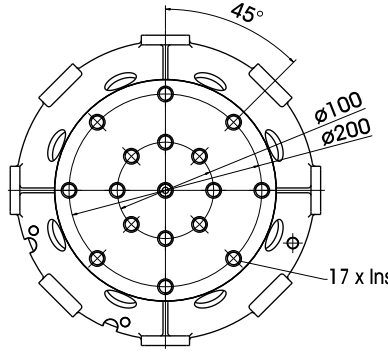
Rated peak force $Sine_{pk}$/$Random_{RMS}$/$Shock_{pk}$ [1]	11000/11000/33000 N
Frequency range	2-3000 Hz
Main resonance frequency	>2300 Hz
Max. displacement Peak-Peak	50.8 mm
Max. velocity Sine/Random/Shock	2.0/2.0/2.5 m/s
Max. acceleration Sine/Random/Shock[1]	85/65/200 g
Suspension stiffness	75 N/mm
Effective moving mass	13 kg
Max. weight tested	150 kg
Weight	1100 kg
Magn. stray field Std./low degaussing	<1.5/<0.8 mT
Armature diameter	230 mm
Min. required compressed air supply	600 kPa
Interlocks	Temperature, displacement, cooling air, overcurrent, compressed air

1) theoretical maximum shock value. Depends on payload, amplifier, shock and shock width

S 51010/LS-230 (Example drawing) Dimensions in mm







Armature 230 (Standard)

SCOPE OF DELIVERY, OPTIONS AND FEATURES OF THE SYSTEM

Scope of delivery:
- Vibration exciter 11 kN
- Swivel frame
- Power amplifier 22.5 kVA
- Cooling blower
- Connection cables (each 5 m)
- Power cables (5 m) for amplifier (CEE 63 connector)
- Blower hose ø100 mm (5 m)
- Compressed-air hose NW 7,2 (Standard) (3 m)

Options:
- Different hole pattern of armature (different pitch diameter and/or thread inserts) at customers request
- Low degaussing kit to further reduce stray magnetic field
- Squeak&Rattle (Silent operation without blower)
- Wheels&Rails (incl. 3m rails)
- Thermobarrier (-40°C to +140°C)
- Chamber leadthrough
- Climatic chamber support kit
- Remote control (Software)
- Silencer for cooling blower (Noise reduction 3 - 6 dB(A))
- Acoustic enclosure for cooling blower (Noise reduction 5 - 23 dB(A))
- Cable extension
- Factory acceptance test

Features:
- Vibration isolation < 6 Hz
- Coarse filter unit
- Fully automatic pneumatic load compensation
- Automatic centering of the armature
- Degauss kit to reduce stray magnetic field
- Integrated mains switch and line filter
- Integrated field power supply
- Noise-button
- Input voltage analyzer
- Voltage clipping limiter to avoid clipping
- 3 Sigma Peak current
- Made in Germany
- Servicehotline

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Subject to modifications

TIRA Vibration Test Systems TV 51010/LS-230

Vibration Test System TV 51010/LS-230

TECHNICAL PARAMETERS Amplifier A 1 01 3 023

Output power$_{RMS}$	22500 VA
Frequency range	DC - 4 kHz
Voltage$_{RMS}$, max.	150 V
Current$_{RMS}$, max.	150 A
Load resistance, opt.	1 Ohm
Signal input voltage$_{RMS}$ (switchable)	2.5/5/10 V
Distortion	< 0.7 %
Signal to noise ratio	> 90 dB
Field voltage, max.	140 V
Field current, max.	8 A
Weight	330 kg
Dimensions (WxHxD)	600 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 (incl. blower)	22 kVA
Interlocks:	Overload, temperature, clipping and more

Features:

High Signal to noise ratio of >90 dB	Noise-button
Field supply integrated	Input voltage analyzer
Mains switch and integrated line filter	Voltage clipping limiter to avoid clipping
ESD-monitoring (Protection of the system against damage)	3 Sigma peak current
Field voltage/Field current variable according to customer spec.	

TECHNICAL PARAMETERS Cooling blower TB 120

Volume flow rate	max. 1140 m³/h
Total pressure difference	max. 28 kPa
Power	11.5 kW
Frequency	50 Hz
Hose diameter	100 mm
Hose length (Std.)	5 m
Weight	131 kg
Dimensions (WxHxD)	600 x 636 x 701 mm
Sound pressure level, max.	max. 87 dB(A)
Power supply (standard)	by amplifier rack
Max. power consumption at 400 V	16 kVA

Options:

Silencer TB 120-SI (Noise reduction 3 - 6 dB(A))
- Dimensions (LxD): 1100 x 160 mm
- Weight: 1.2 kg

Acoustic enclosure TB 120-AE (Noise reduction 5 - 23 dB(A))
- Dimensions (WxHxD): 1094 x 1086 x 1000 mm
- Weight: 134 kg

Hose length according to customers request (up to 10 m)

Cooling blower TB 120

Silencer TB 120-SI (optional)

Acoustic enclosure TB 120-AE (optional)

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