Vibration Test System TV 5220/LS-120

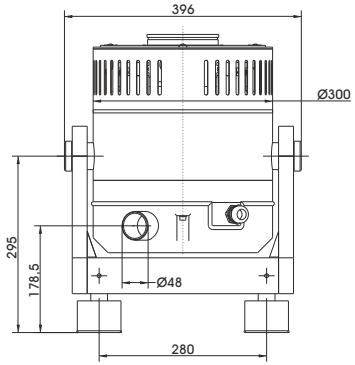
TECHNICAL PARAMETERS Vibration exciter S 5220/LS-120

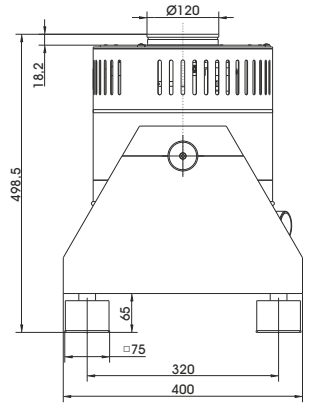
Rated peak force $Sine_{pk}$/$Random_{RMS}$[1]/$Shock_{pk}$[2]	1000/650/1500 N
Frequency range	2 - 6500 Hz
Main resonance frequency	>4600 Hz
Max. displacement Peak-Peak[3]	45.0 mm
Max. velocity $Sine_{pk}$/$Random_{RMS}$/$Shock_{pk}$	1.5/1.5/2.0 m/s
Max. acceleration Sine/Random/Shock	60/35/90 g
Suspension stiffness	electronically adjustable
Effective moving mass (±5%)	1.75 kg
Max. payload	20 kg
Total mass	122 kg
Magn. stray field without/with degaussing[4]	<8.5/<1 mT
Armature diameter	120 mm
Interlocks	Field coil temperature, displacement, cooling air, overcurrent

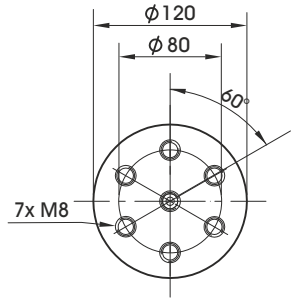
1) Random force according to ISO 5344:2004
2) Theoretical maximum shock value. Depends on payload, amplifier, shock and shock width
3) Impact by moving to static mass and frequency is possible
4) measured at 150 mm above armature
For long-term tests, the load must be reduced to 80 %. Continuous operation at maximum load can cause damage.



S 5220/LS-120 (Example drawing) Dimensions in mm







Armature (Standard)

SCOPE OF DELIVERY, OPTIONS AND FEATURES OF THE SYSTEM

Scope of delivery:
- Vibration exciter
- Trunnion mount
- Power amplifier
- Field power supply (FPS)
- Electronic zero point regulation (Tira Middle Control=TMC)
- Cooling blower
- Connection cable (5 m)
- Power cables (each 1.5 m) for amplifier, FPS and TMC (CEE 7/7 connector)
- Blower hose ø50 mm (5 m)

Options:
- Different thread inserts in the armature at customer request
- Degauss kit to reduce stray magnetic field
- Squeak&Rattle (Silent operation without blower)
- 19" Rack for integrating of amplifier/FPS
- Thermobarrier (-40°C to +140°C)
- Chamber leadthrough
- Silencer for cooling blower (Noise reduction up to 8 dB(A))
- Acoustic enclosure for cooling blower (Noise reduction 15 - 23 dB(A))
- Cable extension
- Factory acceptance test

Features:
- Vibration isolation < 6 Hz
- Coarse filter unit
- Fully automatic electronic load compensation
- Electronic zero point regulation with adjustable stiffness
- Automatic centering of the armature
- High cross-axial stiffness
- Minimum maintenance effort
- Made in Germany
- Servicehotline

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Subject to modifications

Vibration Test System TV 5220/LS-120

TECHNICAL PARAMETERS Amplifier BDA 1300-ET

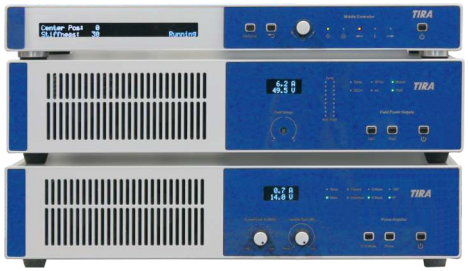
Output power$_{RMS}$, max.	1300 VA
Frequency range	2 - 25000 Hz
Voltage-/Current mode	yes/no
Voltage$_{RMS}$, max.	72 V
Current$_{RMS}$, max.	18 A
Signal input voltage$_{PK}$	3.5 V
Distortion (THD, at frequency range 40 Hz to 1 kHz)	< 0.1 %
Signal to noise ratio	> 100 dB
Field power supply (FPS)	yes (external)
Field voltage, max.	69 V
Field current, max.	9 A
Total mass (Amplifier+FPS+TMC)	43 kg
Dimensions (Amplifier+FPS+TMC, WxHxD)	440 x 260 x 500 mm
Power supply Amplifier+TMC (Standard)	1~ / N / PE 230 V±5% 50 Hz, CEE 7/7
Power supply FPS+Blower (Standard)	1~ / N / PE 230 V±5% 50 Hz, CEE 7/7
Recommended fuse protection (Standard)	each one 16 A slow
Max. power consumption at 230 V (Amplifier)	1.3 kVA
Max. power consumption at 230 V (FPS+blower)	1.6 kVA
Max. power consumption at 230 V (TMC)	0.1 kVA
Interlocks:	Overload, temperature, clipping

Features:
- High Signal to noise ratio of > 100 dB
- Monitoring output of voltage and current

TECHNICAL PARAMETERS Cooling blower TB 0140

Volume flow rate	max. 140 m³/h
Total pressure difference	max. 150 mbar
Power	1.1 kW
Frequency	50 Hz
Hose diameter	50 mm
Hose length (Std.)	5 m
Total mass	16 kg
Dimensions (WxHxD)	286 x 302 x 292 mm
Sound pressure level, max.	max. 63 dB(A)
Power supply (standard)	by Field power supply (FPS)
Max. current consumption at 400 V	7.3 A

Options:
Silencer TB 0140-SI (Noise reduction up to 8 dB(A))
  Dimensions (LxD): 308 x 82 mm
  Mass: 0.2 kg
Acoustic enclosure TB 0140-AE (Noise reduction 15 - 23 dB(A))
  Dimensions (WxHxD): 650 x 760 x 860 mm
  Mass: 45 kg
Hose length according to customers request (up to 10 m)



Zero point regulation, Field power supply and Amplifier



Cooling blower TB 0140



Silencer TB 0140-SI (optional)



Acoustic enclosure TB 0140-AE (optional)

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