

## TECHNICAL PARAMETERS Vibration exciter S 59410/AIT-440

Rated peak force Sine <sub>pk</sub> /Random <sub>RMS</sub> <sup>1</sup> /Shock <sub>pk</sub> <sup>2</sup>	100000/89000/300000 N
Frequency range	5 - 2400 Hz
Main resonance frequency	2100 Hz
Max. displacement Sine/Random/Shock (Pk-Pk) <sup>3</sup>	63.5/63.5/76.2 mm
Max. velocity Sine/Random/Shock	2.0/2.0/4.0 m/s
Max. acceleration Sine/Random/Shock	100/85/350 g
Suspension stiffness	175 N/mm
Effective moving mass	58 kg
Max. payload	910 kg
Total mass	4500 kg
Magnetic stray field <sup>4</sup>	3.5 mT
Armature diameter	440 mm
Required compressed air supply	Min. 600 kPa
Interlocks	Temperature, displacement, water flow rate, differential pressure, overcurrent, compressed air, conductance

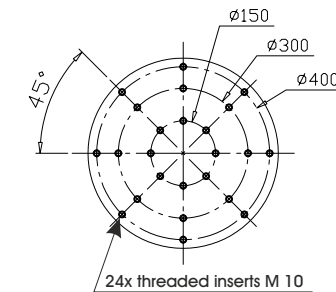
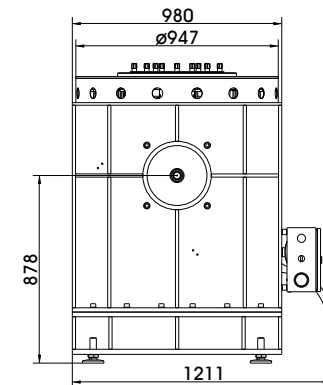
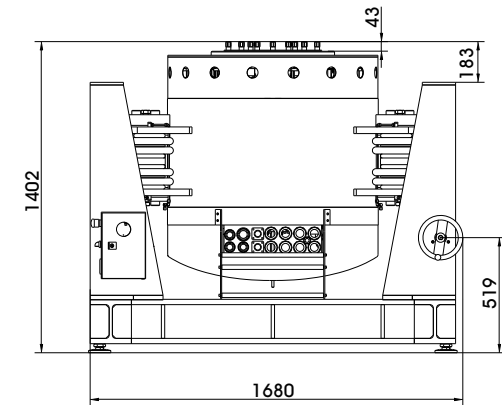
1) Random force according to ISO 5344:2004

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 inserts

For long-term tests, the load must be reduced to 80 %. Continuous operation at maximum load can cause damage.



Armature 440 (Standard)

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

### Scope of delivery:

Vibration exciter 100 kN  
Trunnion mount  
with integrated vibration isolation (AIT)  
Power amplifier 150 kVA  
Cooling unit with integrated hydraulic unit  
Connection cables (each 10 m)  
Water hoses with self-sealing couplings (each 10 m)  
Hydraulic hoses with self-sealing couplings (each 10 m)  
Compressed-air hose NW 7.2 (Standard) (10 m)

### Options:

Different hole pattern of armature (different pitch diameter and/or thread inserts) at customers request  
Thermobarrier (-40°C to +140°C)  
Chamber leadthrough  
Climatic chamber support kit  
Remote control (Software)  
ASM-Mode (Auto Shutdown Manager)  
Cable/Hose extension  
Factory acceptance test

### Features:

Vibration isolation < 3 Hz (AIT)  
Fully automatic pneumatic load compensation  
Low-friction hydrostatic bearing (Dual Bearing)  
AIT fixable  
Automatic centering of the AIT-System and the armature  
Degauss kit to reduce stray magnetic field  
Shaker-water circuit with overpressure  
Automatic permanent monitoring of conductance  
Integrated mains switch and line filter  
Integrated field power supply  
Energy-saving-mode  
4 Sigma peak current  
Made in Germany  
Servicehotline

## TECHNICAL PARAMETERS Power Amplifier A 5 40 11 294

Output power <sub>RMS</sub>	150000 VA	<b>Features:</b> 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-Touchscreen
Frequency range	DC - 5 kHz	
Voltage <sub>RMS</sub> max.	±212 V	
Current <sub>RMS</sub> max.	1400 A	
Signal input voltage	10 V	
Total Harmonic Distortion (at 70A <sub>RMS</sub> , 200 Hz)	< 0.2 %	
Signal to noise ratio	> 80 dB	
Field voltage	155 V	
Field current	260 A	
Total mass	2400 kg	
Dimensions (WxHxD)	2840 x 2200 x 1050 mm	
Power supply (Standard)	3~ / N / PE 400 V±5% 50 Hz	
Recommended fuse protection (Standard)	Direct connection (Terminal block) 250 A slow	
Max. power consumption at 400 V (incl. cooling unit)	167 kVA	
Interlocks:	Overload, Temperature, Displacement, Compressed air, Phase monitoring, Emergency stop, Differential pressure, Water flow rate, Conductance	



## TECHNICAL PARAMETERS Cooling unit C 59410

<b>Environmental conditions:</b>		<b>Features:</b> Closed system --> No pollution and no water loss by evaporation The system works with a higher pressure --> No cavitation interferences at the measuring signal Manometers and flow meters at several places within the circuits Integrated conductance monitoring and demineralisation Fine filter with pollution monitoring Reduction of water consumption at part load by controlling of the process water flow Self-sealing couplings (free from leakage) Optional: Hose length according to customer specs (up to 20 m) Optional: Monitoring of data, warnings and error messages at the PC
Temperature	5 - 30 °C	
Relative humidity	10 - 80 %	
Energy transfer	max. 3 kW	
<b>Process water:</b>		
Temperature	5 - 15 °C	
Volume flow at max. supply temperature	10 m³/h	
Working pressure: supply - static	≤ 8 bar (≤ 800 kPa)	
Working pressure: dynamic differential pressure	≥ 3 bar (≥ 300 kPa)	
Dissipated heat flow	max. 110 kW	
Nominal width of supply pipes	R 1 1/4 IT (32 mm)	
pH value	7 ± 1	
Dimensions of dirt particles	< 25 µm	
Water hardness (total/carbonate)	< 1.4 mmol/l / < 0.9 mmol/l	
Total mass	550 kg	
Dimensions (WxHxD)	600 x 2140 x 970 mm	

