

TECHNICAL PARAMETERS Vibration exciter S 59430/AIT-840

Rated peak force Sine _{pk} /Random _{RMS} ¹ /Shock _{pk} ²	300000/270000/900000 N
Frequency range	5 - 2000 Hz
Main resonance frequency	1500 Hz
Max. displacement Sine/Random/Shock (Pk-Pk) ³	63.5/63.5/76.2 mm
Max. velocity Sine/Random/Shock	2.0/2.0/3.5 m/s
Max. acceleration Sine/Random/Shock	70/70/250 g
Suspension stiffness	450 N/mm
Effective moving mass	275 kg
Max. payload	2500 kg
Total mass	18500 kg
Magnetic stray field ⁴	2.5 mT
Armature diameter	840 mm
Required compressed air supply	Min. 600 kPa
Interlocks	Temperature, displacement, water flow rate, differential pressure, overcurrent, compressed air, conductance

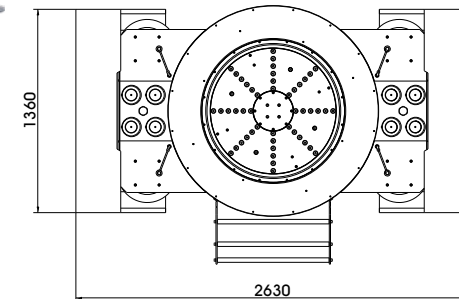
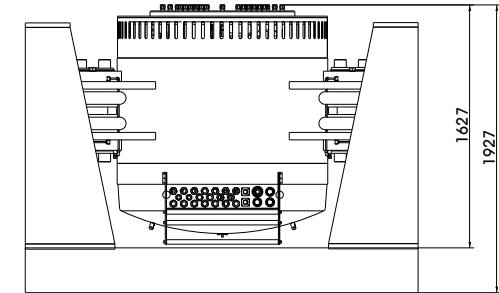
1) Random force according to ISO 5344:2004

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.



SCOPE OF DELIVERY, OPTIONS AND FEATURES OF THE SYSTEM

Scope of delivery:

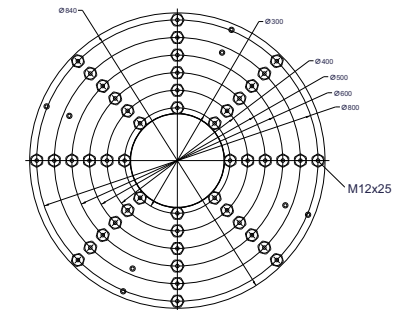
- Vibration exciter 300 kN
- Trunnion mount with integrated vibration isolation (AIT)
- Power amplifier 240 kVA
- Field power supply 140 kVA
- Cooling unit with integrated hydraulic unit
- Connection cables (each 10 m)
- Water hoses with self-sealing couplings (each 10 m)
- Hydraulic hoses with self-sealing 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



Armature 840 (Standard)

TECHNICAL PARAMETERS Power Amplifier A 5 00 11 483 + external field power supply

Output power _{RMS}	240000 VA	Features: 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 _{RMS} max.	±212 V	
Current _{RMS} max.	2300 A	
Signal input voltage	10 V	
Total Harmonic Distortion (at 70A _{RMS} , 200 Hz)	< 0.2 %	
Signal to noise ratio	> 80 dB	
Field voltage	360 V	
Field current	300 A	
Total mass Amplifier	2600 kg	
Total mass Field Power Supply	1135 kg	
Dimensions Amplifier (WxHxD)	2840 x 2200 x 1050 mm	
Dimensions FPS (WxHxD)	1200 x 1740 x 800 mm	
Power supply (Standard)	3~ / N / PE 400 V±5% 50 Hz Direct connection (Terminal block)	
Recommended fuse protection Amplifier (Standard)	450 A slow	
Recommended fuse protection FPS (Standard)	200 A slow	
Max. power consumption at 400 V incl. cooling unit	370 kVA (FPS: 110 kVA)	
Interlocks:	Overload, Temperature, Displacement, Compressed air, Phase monitoring, Emergency stop, Differential pressure, Water flow rate, Conductance	



Amplifier



Field power supply

TECHNICAL PARAMETERS Cooling unit C 59430

Environmental conditions:		Features: 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	
Process water:		
Temperature	5 - 15 °C	
Volume flow at max. supply temperature	24 m³/h	
Working pressure: supply - static	≤ 10 bar (≤ 1000 kPa)	
Working pressure: dynamic differential pressure	≥ 3 bar (≥ 300 kPa)	
Dissipated heat flow	max. 220 kW	
Nominal width of supply pipes	R 1 1/2 IT (40 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	620 kg	
Dimensions (WxHxD)	800 x 2140 x 1000 mm	

