

TECHNICAL PARAMETERS

Rated peak force Sine _{pk} /Random ¹ /Shock _{pk} ²	125000/110000/375000 N
Frequency range	5 - 2500 Hz
Main resonance frequency	> 2100 Hz
Max. displacement Sine/Random/Shock (Pk-Pk) ³	63.5/63.5/76.2 mm
Max. velocity Sine/Random/Shock	2.0/2.0/4.0 m/s
Max. acceleration Sine/Random/Shock	100/90/300 g
Suspension stiffness	250 N/mm
Effective moving mass	76 kg
Max. payload	910 kg
Magnetic stray field ⁴	< 1.5 mT
Armature diameter	480 mm
Required compressed air supply	Min. 600 kPa
Total mass	5300 kg
Interlocks	Temperature, displacement, water flow rate, differential pressure, overcurrent, compressed air, conductance

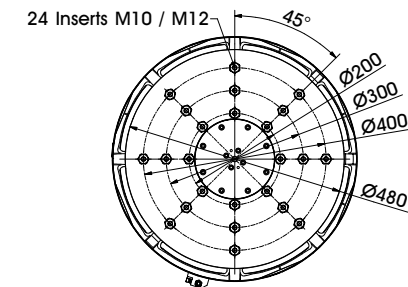
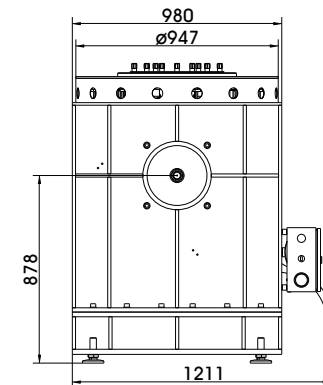
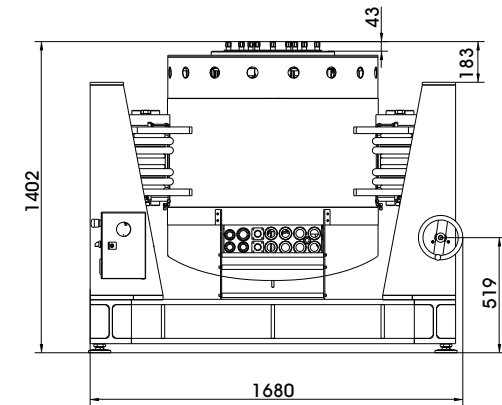
1) Random force according to ISO 5344

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 480 (Standard)

SCOPE OF DELIVERY, OPTIONS AND FEATURES OF THE SYSTEM

Scope of delivery:

- Vibration exciter S 59412
- Trunnion mount with integrated vibration isolation (AIT)
- Power amplifier
- Field power unit
- 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
- Thermo barrier (-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
- Energy-saving-mode
- 4 Sigma peak current
- Made in Germany
- Servicehotline

TECHNICAL PARAMETERS Power Amplifier A 6 00 11 315 + Field power supply

Output power _{RMS}	150000 VA	Interlocks: Overload, Temperature, Displacement, Compressed air, Phase monitoring, Emergency stop, Differential pressure, Water flow rate, Conductance
Frequency range	DC - 5 kHz	
Voltage _{RMS} max.	±212 V	
Current _{RMS} max.	1500 A	
Signal input voltage _{RMS}	10 V	Features:
Total Harmonic Distortion (at 70A _{RMS} , 200 Hz)	< 0.2 %	Mains switch and integrated line filter
Signal to noise ratio	> 80 dB	Lo-Field/Hi-Field (Energy-saving mode)
Power supply - Amplifier (Standard)	3~ / N / PE 400 V±5% 50 Hz	Field voltage/Field current variable
	Direct connection (Terminal block)	according to customer spec.
Power supply - Field power supply (Standard)	3~ / N / PE 400 V±5% 50 Hz	4 Sigma peak current
	Direct connection (Terminal block)	Color-Touchscreen
Max. power consumption at 400 V		Total power consumption - Test profile ISO 5344
Amplifier (incl. cooling unit)	140 kVA	Random force vector 85% continuous load, 45 g _{RMS} 125.9 kVA
Field power supply	40 kVA	Random force vector 30% continuous load, 15 g _{RMS} 44.9 kVA
Recommended fuse protection Amplifier (Standard)	225 A slow	
Recommended fuse protection FPS (Standard)	125 A slow	
Dimensions - Amplifier (WxHxD)	2400 x 2200 x 900 mm	
Dimensions - Field power supply (WxHxD)	600 x 1740 x 850 mm	
Total mass - Amplifier	1900 kg	
Total mass - Field power supply	500 kg	



Amplifier (illustration similar)



Field power supply

TECHNICAL PARAMETERS Cooling unit C 59410

Environmental conditions:		Features:
Temperature	5 - 30 °C	Closed system --> No pollution and no water loss by evaporation
Relative humidity	10 - 80 %	The system works with a higher pressure --> No cavitation interferences at the measuring signal
Energy transfer	max. 3 kW	Manometers and flow meters at several places within the circuits
		Integrated conductance monitoring and demineralisation
Process water:		Fine filter with pollution monitoring
Temperature	5 - 15 °C	Reduction of water consumption at part load by controlling of the process water flow
Volume flow at max. supply temperature	10 m³/h (for full extension)	Self-sealing couplings (free from leakage)
Working pressure: supply - static	≤ 8 bar (≤ 800 kPa)	Optional: Hose length according to customer specs (up to 20 m)
Working pressure: dynamic differential pressure	≥ 3 bar (≥ 300 kPa)	Optional: Monitoring of data, warnings and error messages at the PC
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	
Dimensions (WxHxD)	620 x 2150 x 920 mm	
Total mass	360 kg	

