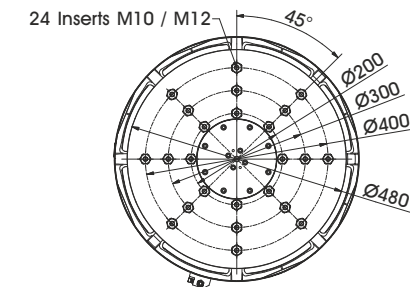
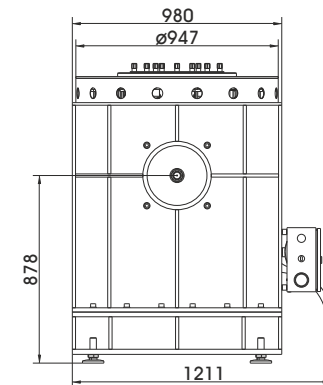
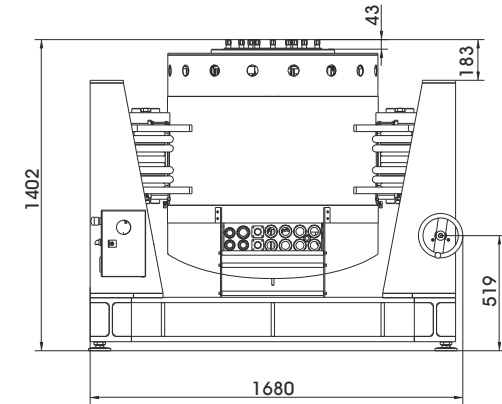


TECHNICAL PARAMETERS

| | |
|---|--|
| Rated peak force Sine _{pk} /Random ¹ _{RMS} /Shock _{pk} ² | 100000/89000/300000 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 _{pk} /Random _{RMS} /Shock _{pk} | 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, overcurrent, compressed air, conductance |



Armature 480 (Standard)

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.

SCOPE OF DELIVERY, OPTIONS AND FEATURES OF THE SYSTEM

Scope of delivery:

- Vibration exciter
- 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:

TIRA EMS Energy Management System

Energy-saving option
with continuously variable field power

- Different hole pattern of armature (different pitch diameter and/or thread inserts) at customers request (M10/M12)
- Thermo barrier (-40°C to +140°C)
- Chamber leadthrough
- Climatic chamber support kit
- Remote display
- ASM-Mode (Auto-Shutdown-Manager)
- Cable/Hose extension
- Factory acceptance test
- Upgradable up to a peak force of 125 kN

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 (Field switchover)
- 4 Sigma peak current
- Made in Germany
- Servicehotline

TECHNICAL PARAMETERS Power Amplifier A 6 00 11 273 + Field power supply

| | | |
|---|------------------------------------|--|
| Output power _{RMS} max. | 150000 VA | Interlocks: Overload, Temperature, Displacement, Compressed air, Phase monitoring, Emergency stop, Water flow rate, Conductance |
| Frequency range | DC - 5 kHz | |
| Voltage _{RMS} max. | 212 V | Features: Multi-level field switching (energy saving mode) Mains switch and integrated line filter Field voltage/Field current variable according to customer spec. 4 Sigma peak current Color-Touchscreen Upgradable by modular design |
| Current _{RMS} max. | 1300 A | |
| Signal input voltage _{pk} | ±10 V | |
| Total Harmonic Distortion (THD, at 70A _{RMS} , 200 Hz) | < 0.2 % | |
| Signal to noise ratio | > 80 dB(A) | |
| Power supply - Amplifier (Standard) | 3~ / N / PE 400 V±5% 50 Hz | |
| | Direct connection (Terminal block) | |
| Power supply - Field power supply (Standard) | 3~ / N / PE 400 V±5% 50 Hz | |
| | Direct connection (Terminal block) | |
| Max. power consumption at 400 V | | |
| Amplifier (incl. cooling unit) | 95 kVA | |
| Field power supply | 40 kVA | |
| Recommended fuse protection Amplifier (Standard) | 225 A slow (for full extension) | |
| 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 | 1800 kg | |
| Total mass - Field power supply | 500 kg | |



Amplifier



Field power supply

TECHNICAL PARAMETERS Cooling unit C 59412

| | | |
|---|------------------------------|--|
| 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 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) |
| 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 | 10 m³/h (for full extension) | |
| 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 1/2 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 | |
| Dimensions (WxHxD) | 800 x 2200 x 900 mm | |
| Total mass | ~300 kg | |

