Permanent Magnetic Vibration Exciter Type 4808

**Uses**
- General vibration testing
- Mechanical impedance and mobility measurements
- Experimental modal analysis
- Accelerometer calibration

**Features**
- Force rating 112 N (25 lbf) sine peak (187 N (42 lbf) with cooling)
- Frequency range 5 Hz to 10 kHz
- First axial resonance 10 kHz
- Continuous 12.7 mm (0.5 in) peak-to-peak displacement with overtravel stops
- Maximum bare table acceleration 700 m/s² (71 g)
- Rugged construction
- Low cross motion and low distortion
- Lapped and hardened surface
- Replaceable inserts for moving element protection
- Robust rectilinear guidance system
- Highly damped axial, transverse and flexural resonances
- Interconnecting cable with two high-quality, 4-pin Neutrik® speakON® connectors
- Optimized performance using Power Amplifier Type 2719

**Description**
Permanent Magnetic Vibration Exciter Type 4808 is a high-quality, compact exciter with a permanent magnetic field. It is designed for long, trouble-free operation, and has a force rating of 112 newtons (25 lbf) enabling relatively heavy loads to be excited to high g levels. Type 4808 will normally be driven by Power Amplifier Type 2719 rated at 180 VA, but can also be driven by any amplifier up to a maximum input current of 15 A RMS without assisted cooling.

The moving element is supported by a robust rectilinear guidance system consisting of grouped radial and transverse flexures in a unique construction. The flexures are made from a bonded sandwich of spring steel and a damping elastomer, providing a clean acceleration waveform with low cross motion and low distortion characteristics.

**Fig. 1 Sine performance curves for Vibration Exciter Type 4808 for operation without assisted cooling**

![Sine performance curves for Vibration Exciter Type 4808](image)
**Specifications – Permanent Magnetic Vibration Exciter Type 4808**

### COMPLIANCE WITH STANDARDS
- The CE marking is the manufacturer’s declaration that the product meets the requirements of the applicable EU directives.
- RCM mark indicates compliance with applicable ACMA technical standards – that is, for telecommunications, radio communications, EMC and EME.
- China RoHS mark indicates compliance with administrative measures on the control of pollution caused by electronic information products according to the Ministry of Information Industries of the People’s Republic of China.
- WEEE mark indicates compliance with the EU WEEE Directive.

### Temperature:
- According to IEC 60068–2–1 & IEC 60068–2–2
- Operating temperature: 5 to 40 °C (41 to 104 °F)
- Storage temperature: −25 to +70 °C (−13 to +158 °F)
- Humidity: According to IEC 60068–2–3
- Damp Heat: 90% RH (non-condensing at 40 °C (104 °F))

### SPECIFICATIONS
- **Rated Force:** 112 N, 25 lbf sine-peak (with assisted air cooling 187 N, 42 lbf peak)
- **Frequency Range:** 5 Hz to 10 kHz bare table
- **Axial Resonant Frequency:** 10 kHz bare table
- **Max. Bare Table Acceleration:** 700 m/s² (71 g)
- **Max. Displacement:** 12.7 mm (0.5 in) peak-to-peak
- **Max. Velocity:** 1.4 m/s (55 in/s)
- **Dynamic Weight of Moving Element:** 60 grams (0.35 lb)
- **Static Flexure Stiffness:** 5.6 N/mm (32 lbf/in)
- **Maximum Input Current:** 15 A RMS (with assisted air cooling 25 A RMS)
- **Current-To-Force Ratio:**
  - Coils in Parallel: approximately 0.16 A/F (sine peak)
  - Coils in Series: approximately 0.08 A/F (sine peak)
- **Stray Magnetic Field:**
  - 20 × 10⁻³ Tesla at table face
  - 8 × 10⁻³ Tesla at 12.7 mm (0.5 in) above table face
  - **Coil Impedance:** Approximately 0.8 Ω at 500 Hz with bare table and coils in parallel
- **Table Diameter:** 62.5 mm (2.45 in)
- **Fastening Thread:** 5 × 5/16 –18 UNC for M5 and 10–32 UNF inserts. 1 central insert plus 4 equi-spaced on circle of Ø 50.8 mm

### WEIGHT AND DIMENSIONS
- **Weight:** 35 kg (77.1 lb)
- **Diameter:** 215 mm (8.46 in)
- **Height:** 200 mm (7.87 in)

### Ordering Information

<table>
<thead>
<tr>
<th>Type 4808</th>
<th>Permanent Magnetic Vibration Exciter</th>
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<tbody>
<tr>
<td>Includes the following accessories:</td>
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<tr>
<td>- AQ-0649-D-050: Cable with two 4-pin Neutrik® speakON® plugs, length 5 m (16.4 ft)</td>
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<td>- 10 × YS-0810: Thread inserts (M5)</td>
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<td>- 10 × YS-0811: Thread inserts (10–32 UNF)</td>
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<td>- 1 × QA-0061: Insert Mounting Tool</td>
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<tr>
<td>- 2 × YM-2002: Blanking Plugs</td>
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<td>- 1 × QS-0003: Bottle of Loctite® compound</td>
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### Optional Accessories

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<thead>
<tr>
<th>TRUNNION</th>
<th>Power Amplifier (180 VA)</th>
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<tr>
<td>WA-0125</td>
<td>Mounting Equipment (including isolated studs YP-0150 and non-isolated studs YQ-2960)</td>
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<tr>
<td>WA-0252</td>
<td>Set of 10 Stud Adaptors, 10–32 UNF to ¼–28 UNF</td>
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<tr>
<td>WA-0253</td>
<td>Set of 20 Bushing Adaptors, 10–32 UNF to ¼–28 UNF</td>
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### TRADEMARKS
Neutrik and speakON are registered trademarks of Neutrik AG. Loctite is a registered trademark of Henkel AG & Co.

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