

# PRODUCT DATA

## PM Vibration Exciter — Type 4808

### USES

- Vibration testing
- Mechanical impedance measurements
- Educational demonstrations
- Structural response testing
- Vibration transducer calibration

### FEATURES

- Force rating 112 newton (25 lbf) sine peak (187N (42 lbf) with cooling)
- Frequency range 5 Hz to 10 kHz
- First axial resonance 10 kHz
- Maximum bare table acceleration  $700 \text{ m/s}^2$  (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
- Continuous 12.7 mm (0.5 in) peak-tp-peak displacement with overtravel stops
- Interconnecting cable with two high-quality, 4-pin Neutrik Speakon connectors



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## Description

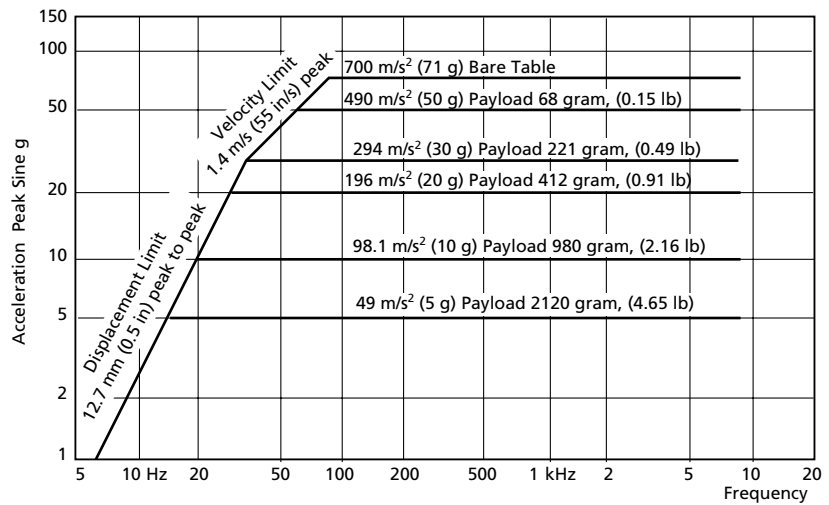
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Designed for long, trouble-free operation, Vibration Exciter Type 4808 is a high-quality compact machine with a permanent magnetic field. It has a force rating of 112 newton (25 lbf) enabling relatively heavy loads to be excited to high g levels. The 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.

**4808**

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



272140/2e

## Specifications – PM Vibration Exciter Type 4808

### COMPLIANCE WITH STANDARDS



compliance with EMC Directive  
compliance with EMC Requirements of Australia and New Zealand

**Safety, EMC Emission and Immunity:** According to relevant standards: EN 61010-1, IEC 61010-1, UL 3111-1, EN 50081-1/2, IEC 61000-6-1/2/3/4, EN 61326-1, CISPR22 Class B limits, FCC Rules Part 15, EN 50082-1/2, EN 61326-1

**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))

**Mechanical:** Non-operating according to IEC 60068-2-6, IEC 60068-2-27, IEC 60068-2-29

### 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

**MAXIMUM BARE TABLE ACCELERATION:** 700 m/s<sup>2</sup> (71 g)

**MAXIMUM DISPLACEMENT:** 12.7 mm (0.5 in) peak-to-peak

**MAXIMUM VELOCITY:** 1.4 m/s (55 in/s)

**DYNAMIC WEIGHT OF MOVING ELEMENT:** 160 gram (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<sup>-3</sup> Tesla at table face

8 × 10<sup>-3</sup> 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 SIZE:** 62.5 mm (2.45 in) diameter

**FASTENING THREAD:** 5 × 5/16" – 18 UNC for M5 and 10–32 UNF inserts. 1 central insert plus 4 equi-spaced on circle of Ø50.8 mm

**TOTAL WEIGHT:** 35 kg (77.1 lb.)

### DIMENSIONS

**Diameter:** 215 mm (8.46 in)

**Height:** 200 mm (7.87 in)

## Ordering Information

Type 4808 PM Vibration Exciter includes the following accessories:  
AQ 0649 Interconnecting Cable (two Neutrik 4-pin Speakon Plug + AG 0007)  
10 × YS 0810 Thread inserts (M5)  
10 × YS 0811 Thread inserts (10–32 UNF)  
1 × QA 0061 Insert Mounting Tool  
2 × YM 2002 Blanking Plugs  
1 × QS 0003 Bottle of Locktite thread cement

## Optional Accessories

WZ 0066 Nylon Stinger Kit  
UA 1596 Five push/pull steel stingers, dia. 2.5 mm  
UA 1597 Five push/pull steel stingers, dia. 3.5 mm  
Type 8001 Impedance Head  
EE 0357 ENDEVCO Model 2312 Force Transducer  
EE 0112 ENDEVCO 2311-1 ISOTRON® Force Transducer  
EE 0113 ENDEVCO 2311-10 ISOTRON Force Transducer  
EE 0114 ENDEVCO 2311-100 ISOTRON Force Transducer  
EE 0115 ENDEVCO 2311-500 ISOTRON Force Transducer  
UA 0125 Mounting Equipment (including isolated studs YP 0150 and non-isolated studs YQ 2960)  
WA 0309 Trunnion  
EE 5227-002 Bushing Adaptor, 10–32 UNF to ¼–28 UNF  
EE 5004 Adaptor, Male 10–32 UNF to Male ¼–28 UNF

## Cables and Connectors with Old Type 2712

JJ 0500 Plug must be soldered onto AQ 0649 Cable where one Neutrik 4-pin Speakon plug is first removed

Brüel & Kjær reserves the right to change specifications and accessories without notice.