

BRÜEL & KJÆR® Modal and Measurement Exciters

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 frequency: 10 kHz
- Maximum displacement: 12.7 mm (0.5 in) peak-to-peak with over-travel stops
- Maximum bare table acceleration: 700 m/s² (71 g)
- Rugged construction
- Robust rectilinear guidance system
- Low cross motion and low distortion
- Highly damped axial, transverse and flexural resonances
- Replaceable inserts for moving element protection
- Optimized performance using Power Amplifier Type 2719
- High-quality cable with 4-pin Neutrik® speakON® connectors included for connection to Type 2719

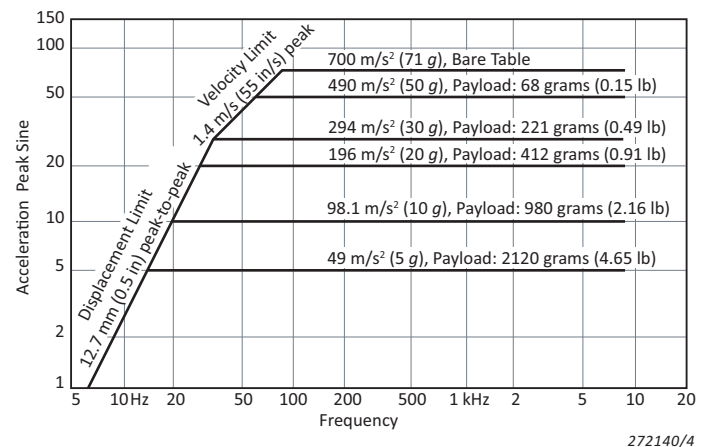


Description

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 N (25 lbf), enabling relatively heavy loads to be excited to high g levels. Power Amplifier Type 2719 (180 VA) has been designed specifically to drive Type 4808, but Type 4808 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



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: 93% RH (non-condensing at 40 °C (104 °F))

SPECIFICATIONS

Rated Force:

- Without assisted air cooling: 112 N (25 lbf) sine peak
- With assisted air cooling: 187 N (42 lbf) sine 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: 160 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 \varnothing 50.8 mm

WEIGHT AND DIMENSIONS

Weight: 35 kg (77.1 lb)

Diameter: 215 mm (8.46 in)

Height: 200 mm (7.87 in)

Type 4808 Vibration Exciter

Includes the following accessories:

- AQ-0649-D-050: Cable with two 4-pin Neutrik speakON connectors, length 5 m (16.4 ft), for connection to Type 2719
- 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

Optional Accessories

TRUNNION

WA-0309 Trunnion

POWER AMPLIFIER

Type 2719 Power Amplifier (180 VA)

STINGERS

Note: Other stingers are available, please ask your sales representative.

WZ-0066

Nylon Stinger Kit

- 10 × stingers, length 50 mm
- 10 × stingers, length 120 mm

UA-1596

Five 2.5 mm Push/Pull Steel Stingers, including:

- 10 × adaptors, diameter 2.5 mm to 10 – 32 UNF
- 5 × steel rods, length 200 mm, diameter 2.5 mm
- 10 × fastening screws

UA-1597

Five 3.0 mm Push/Pull Steel Stingers, including:

- 10 × adaptors, diameter 3.0 mm to 10 – 32 UNF
- 5 × steel rods, length 200 mm, diameter 3.0 mm
- 10 × fastening screws

FORCE TRANSDUCERS AND IMPEDANCE HEAD

Type 8230

CCLD Force Transducer (+44/– 44 N range)

Type 8230-001

CCLD Force Transducer (+220/–220 N range)

Type 8230-002

CCLD Force Transducer (+2200/–2200 N range)

Type 8230-003

CCLD Force Transducer (+22000/–2200 N range)

Type 8230-C-003

Charge Force Transducer (+22200/–2200 N range)

Type 8231-C

Charge Force Transducer (+110000/–2200 N range)

Type 8001

Impedance Head

STUD AND BUSHING ADAPTORS

UA-0125

Mounting Equipment (including isolated studs YP-0150 and non-isolated studs YQ-2960)

UA-2052

Set of 10 Stud Adaptors, 10 – 32 UNF to ¼" – 28 UNF

UA-2054

Set of 20 Bushing Adaptors, 10 – 32 UNF to ¼" – 28 UNF

CABLES

AQ-0649

Cable with two 4-pin Neutrik speakON connectors, available in different lengths from 5 m (16.4 ft) to 40 m (131.2 ft)