



# Reference Sound Source

Models REF500 & REF600

## Highlights

- Compliant to ANSI S12.5-1990 and ISO 6926-1999
- Extremely flat frequency response
- Frequency Range – 50 Hz to 20 kHz
- 1/2 HP industrial motor mounted on heavy duty vibration isolators
- Long life ball bearings
- Sturdy, rugged and reliable
- Sound power equalized to 88.8 dB re 1 pW, A-weighted (REF500)

## Applications

- Sound Power Determination per Referenced Standards
- Qualification Tests on Acoustical Environments
- Sound Absorption Determination by the Steady-state Method
- Sound Power Determination In-situ



The REF500 (120/240V, 50Hz) and REF600 (120/240V, 60Hz) Reference Sound Sources are an excellent tool for providing accurate and repeatable reference sound levels. These sources offer extremely flat response over a broad frequency range and are ideal for use in such applications as sound power, sound absorption, and sound insulation measurements. The REF500/600 can be used for qualification tests on acoustical environments, sound absorption determination by the steady-state method and for Sound Power determination.

Designed for sound power determination using testing against these standards:



Model REF500/REF600

ANSI Standards	ISO Standards
ANSI 12.31	ISO 3741
ANSI 12.32	ISO 3743-1
ANSI 12.33	ISO 3744
ANSI 12.34	ISO 3746
ANSI 12.36	ISO 3747
	ISO 11690
	ISO 14257



**Model REF500/REF600**

## Ordering Information

<b>REF600</b>	Reference sound source, 60 Hz 110 VAC.
<b>REF600C</b>	REF600 with ISO 17025 certificate
<b>CER-REF600</b>	ISO 17025 Calibration and certificate for REF600
<b>REF500</b>	Reference sound source, 50 Hz 220 VAC
<b>REF500C</b>	REF500 with ISO 17025 certificate
<b>CER-REF500</b>	ISO 17025 Calibration and certificate for REF500



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LD-REF500-REF600-00613

Printed in U.S.A.

## REF600

### Standard Compliance

ISO 6926-1999 Acoustics - Determination of the sound power levels of noise sources. Requirement for the performance and calibration of reference sound sources

ANSI S12.5-1990 (R 1997) American National Standard Requirement for the Performance and Calibration of Reference Sound Sources

### Sound Power

100-10,000 Hz	92 dB re 1 pW, A-weighted
Max difference between 1/3rd octave bands	2 dB in 100 - 10,000 Hz range for adjacent bands 5 dB in 100 - 10,000 Hz range for any two bands
Directivity index (1/3rd octave band)	7 dB max vertical, 0.5 dB max horizontal
Repeatability	± 3 dB
Variation of sound power with voltage	Decrease from 120V to 110V yields a 0.5 dB decrease, A-weighted

### Physical

Dimensions	10 in x 10 in x 17 in 254 mm x 254 mm x 432 mm (height)
Weight	35 lbs (16 kg)
Operating Temperature Range	-10 °C to +40 °C
Protection	Rugged carrying case for shipment & storage

### Electrical

Motor characteristics	1/2 horsepower, 3450 rpm, 120/240 V 60 Hz single phase
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## REF500

### Standard Compliance

ISO 6926-1999 Acoustics - Determination of the sound power levels of noise sources. Requirement for the performance and calibration of reference sound sources

ANSI S12.5-1990 (R 1997) American National Standard Requirement for the Performance and Calibration of Reference Sound Sources

### Sound Power

100-10,000 Hz	88 dB re 1 pW, A-weighted
Max difference between 1/3rd octave bands	2 dB in 100 - 10,000 Hz range for adjacent bands 5 dB in 100 - 10,000 Hz range for any two bands
Directivity index (1/3rd octave band)	7 dB max vertical, 0.5 dB max horizontal
Repeatability	± 3 dB
Variation of sound power with voltage	Decrease from 240/220V to 110V yields a 0.5 dBA decrease

### Physical

Dimensions	254 mm x 254 mm x 432 mm (height)
Weight	16 kg
Operating Temperature Range	-10 °C to +40 °C
Protection	Rugged carrying case for shipment & storage

### Electrical

Motor characteristics	1/2 horsepower, 2950 rpm, 120/240V 50 Hz single phase
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For environmental noise monitoring and building acoustics, **Larson Davis** offers a full line of instruments, accessories and software. For personal noise and vibration exposure monitoring, Larson Davis complements this with sound level meters, personal noise dosimeters, human vibration meters, audiometric calibration systems and hearing conservation programs.

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