



Qsources

Precision Acoustics



INFRA-QSOURCES



Qoms²

MONOPOLE
OMNI-DIRECTIONAL SOUND SOURCE

Qoms2 is a next level monopole point source for broadband measurements with high accuracy. Measurements such as room impulse responses, Speech Transmission Index (STI) and reverberation time allow consultants to optimise the acoustics of performance sites such as theaters, schools or religious sites for speech and music.

The exact identification and optimization of early and late reflections allow acoustic experts the correction and optimisation of existing sites.

The reliable measurements from Qoms2 - as well as Qoms1 - can be used to correlate and improve the acoustic models with the purpose of supporting healthy acoustics of new projects already in the design phase.

The smooth broadband spectrum of 50-16000 Hz and output level of 110 dB Lw is more than sufficient for acoustics measurements in any large space. The smooth approximation of spherical radiation, even in the highest octave bands, is unique and far superior to dodecahedron based sources. Qoms2 offers a step up for accurate room acoustic measurements. With a weight of 1.25 kg and compact size, this highly efficient sound source can be effortlessly taken on-site for fast and accurate measurements.



EXTREME LIGHTWEIGHT
1.25 KG.



106 MM. DIAMETER
285 MM. HEIGHT



1/3 OCTAVES: 50-16000 Hz.
BROADBAND HIGH OUTPUT: 110 dB Lw



WORK EFFICIENCY
EASY & FAST SET UP BY 1 SINGLE PERSON



EXCEEDING THE STANDARDS
ISO 3382 / 16283

www.Qsources.be



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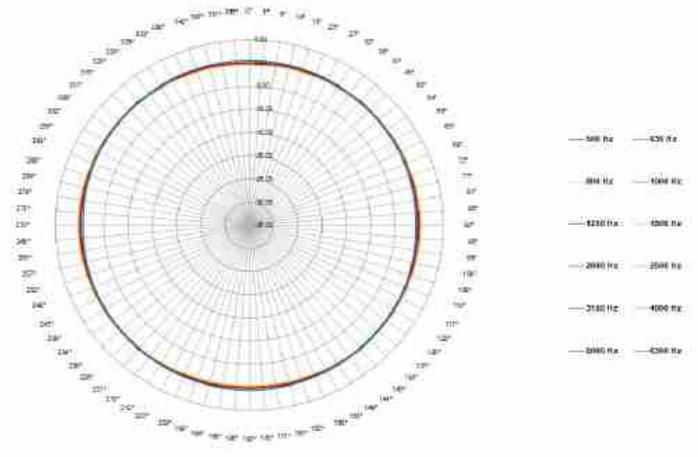
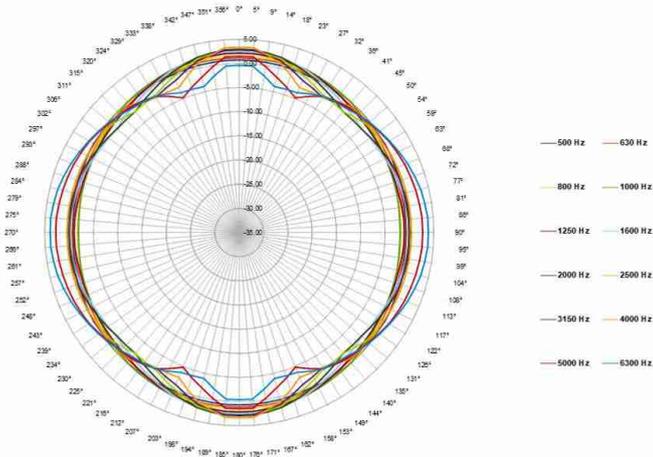


Qoms² is highly accurate at a maximum sound power level of 110 dB and shows an omnidirectional pattern over large frequency bands.

Studies* show that at bands ranging from 125Hz to 1kHz octave, all sound sources can be used for measurements in rooms acoustics. However, above 1kHz measurements might be afflicted. The axial directivity of Qoms2 proves to remain spherical, even in the highest octave bands.

Qoms2 axial directivity per third octave band in dB relative to average:

Qoms2 tangential directivity per third octave band in dB relative to average:



*Source: Witew (2005), *Uncertainties in measurement of single number parameters in room acoustics*.



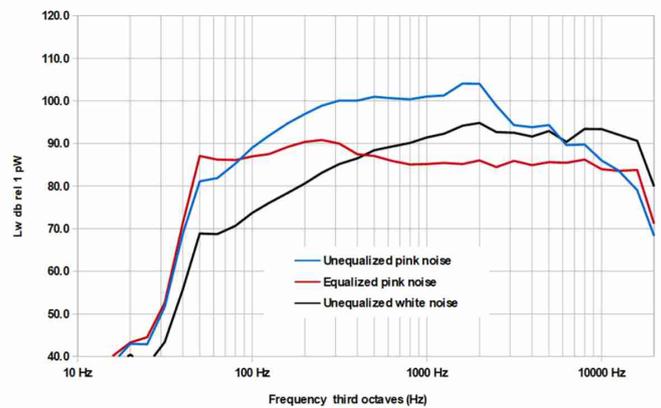
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Qoms2

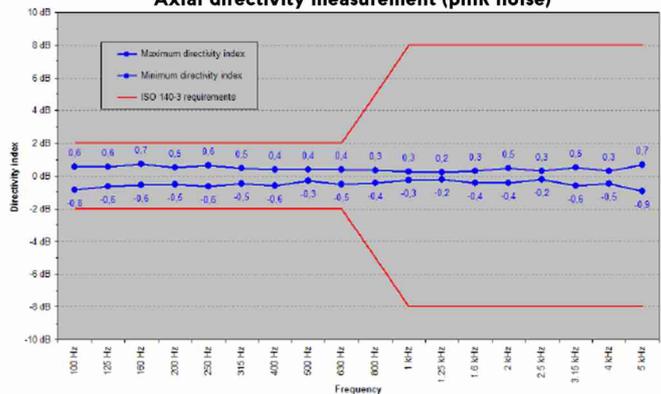
SPECIFICATIONS*	
Description	Monopole omni-directional sound source
Weight	1.25 kg
Frequency range in third octave bands	50-16000 Hz (1/3 octaves)
Height	285mm
Diameter	106mm
Omni directionality (ISO 16283)	Axial +2 dB from 100-16000Hz, Tangential +5 dB from 100-16000 Hz
Sound power level	110 dB Lw, 2 minutes** 104 dB Lw, 15 minutes**
Low frequency sound power at 50Hz	87 dB Lw, 2 minutes** pink noise
Output level stability	better than 0.5dB: during 10 minutes at 104 dB** better than 0.5 dB, during 1.5 minute at 110 dB**
Typical Power requirement	300 Watt RMS to 4 Ohm***
Temperature Protection	✓
Power overload Protection	✓
Main Application area	Room acoustics impulse responses, reverberation, STI in music performance sites, Office noise transfer, etc.
Main Application examples	Music performance sites (e.g. Theatres, Churches, office spaces)
Number of Speakers	2
Q4 driver technology	✓
Seperate subwoofer needed	no
Mounting thread	M6
Ambient temperature range	10 to 45 degrees celsius
Tripod Included	✓
Soft transportation case included	✓
Qualitative, Robust Chassis material	✓
Industry Standards	ISO 140 / 3382 / 16283 / 354 / 14275 / DIN52210 / ASTM E22.35/



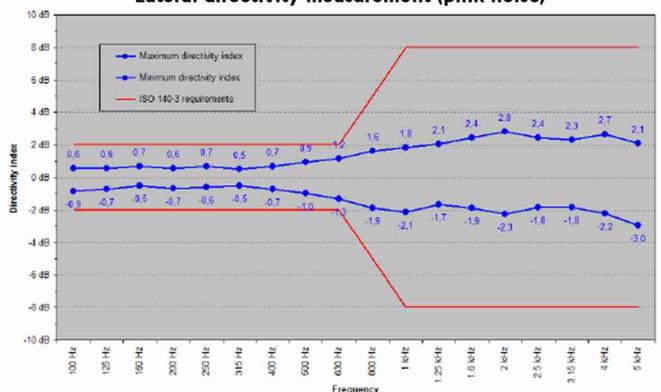
Sound Power Spectra



Axial directivity measurement (pink noise)



Lateral directivity measurement (pink noise)



POTENTIAL APPLICATION AREAS	
Building acoustic	✓
Manufacturing / Material tests	✓
Road-Railway infrastructure	✓
Aerospace	✓
Marine	✓
Military	✓

MEASUREMENT TECHNIQUES	
Room + Hall acoustics	✓
Reverberation	✓
Speech transfer measurement	✓
On-site machinery sound power	✓ Conditional
Barrier performance measurement	✓

* These specifications may be adapted if necessary to improve the quality.
 ** When driven with Qam generated low crest-factor pink noise at 22 Celsius ambient temperature or lower.
 *** For maximum performance a dedicated power amplifier type Qam is available from Infra-Qsources
 **** For a minimal level of 70dB + 10dB margin SPL OA
 ***** Range in free sight. The range can be influenced by metal structures.