



# OMNI series

Omnidirectional sound sources





Whether you are measuring in an anechoic chamber, a noisy factory, or even an aircraft, the Ntek OMNI series fulfills your measurement requirement.

The OMNI series sound sources are employed to uniformly radiate sound in all directions, allowing correct insulation and reverberation time measurements in building and architectural acoustics.

The three sound sources which compose the OMNI series are designed according to the different needs of logistics, sound power and type of measurement.

Ntek offers a complete range of omnidirectional sound sources compliant to 140, 16283 and 3382 ISO Standards.

Furthermore, the spherical sound sources of the OMNI series printed with the innovative additive manufacturing process are designed to assure improved sound radiation and an even closer to perfect isotropy.

The OMNI series is powered by the lightweight and portable AMG mini power amplifier. It includes a pink and white noise generator with an equalized output signal developed for the OMNI series sound sources.

The OMNI series has a unique design; each sound source has uniform dispersion and excellent acoustic performance.

OMNIs offer an optimal compromise between weight, portability, and performance. They are easy to transport, easy to use, and they deliver high-quality results every time.

MODEL	STRUCTURE	WEIGHT	DIMENSIONS	MAXIMUM Lw
<b>OMNI 5"</b>	Wooden	12.5 Kg	Ø = 350 mm	127 dBA
<b>OMNI 4" HP</b>	3D printed (PLA)	7.5 Kg	Ø = 280 mm	128 dBA
<b>OMNI 4" LT</b>	3D printed (PLA)	4.5 Kg	Ø = 280 mm	123 dBA
<b>OMNI 2" XS</b>	3D printed (PLA)	2.5 Kg	200 x 200 x 300 mm	117 dBA

# OMNI 4" LT



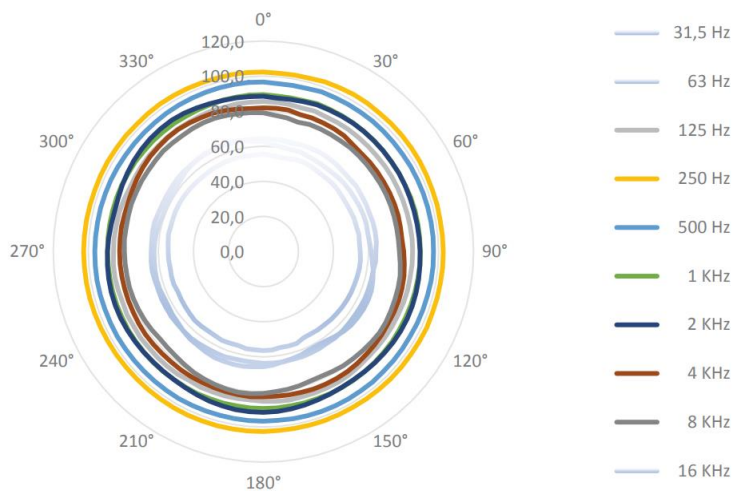
The OMNI 4" LT omnidirectional sound source is the go-to solution to radiate uniformly sound in all directions, allowing correct insulation and reverberation time measurements, either in building or architectural acoustics.

OMNI 4" LT gives the user high manageability and portability, which are essential requirements for acoustic measurements: OMNI 4" LT represents the best compromise between weight and portability.

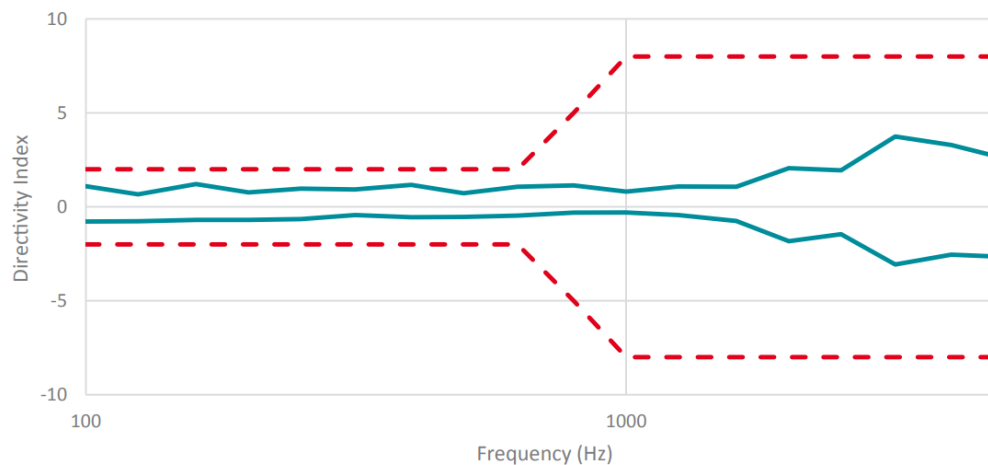
The cluster of twelve loudspeakers that compose the OMNI 4" LT is the reason of its lightweight due to the neodymium magnet that is the core of the transducer.

Thanks to the additive manufacturing process, it has been possible to design a solid structure able to absorb shocks and impacts, preserving the integrity of the dodecahedron.

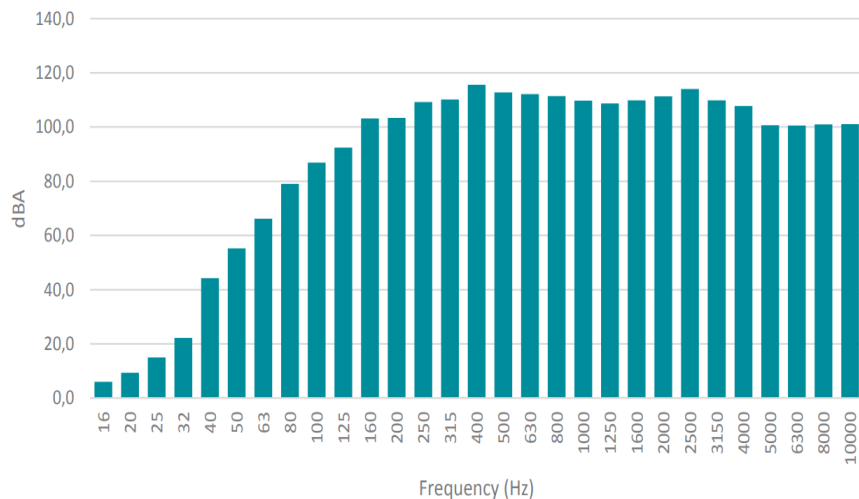
OMNI 4" LT is supplied with 6 meters connecting cable for the amplifier to be moved more easily inside the measurement field.



Directional response - 1/1 octaves



Directivity according to ISO 16283. Upper and lower curves are the ISO 16283 tolerances



Sound power level spectrum - 1/3 octaves

Technical features	
<b>Weight</b>	4.5 Kg
<b>Diameter</b>	280 mm
<b>Lw level</b>	123 dBA
<b>Lp level</b>	115 dB
<b>Lp level (A-weighted)</b>	112 dBA



# OMNI 4" HP



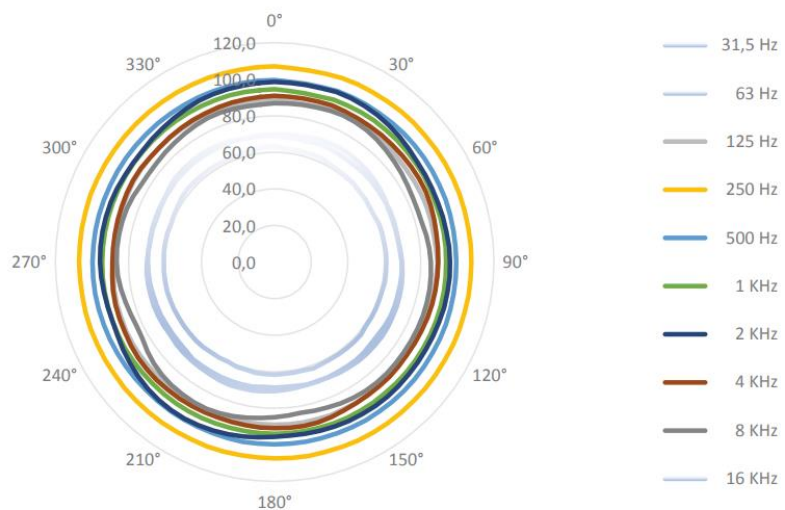
The OMNI 4" HP omnidirectional sound source is the most performant solution to achieve isotropic sound radiation. It allows correct insulation and reverberation time measurements even in large testing environments.

OMNI 4" HP gives the user high manageability and portability, which are essential requirements for acoustic measurements. OMNI 4" HP represents the best compromise between weight and radiated sound power.

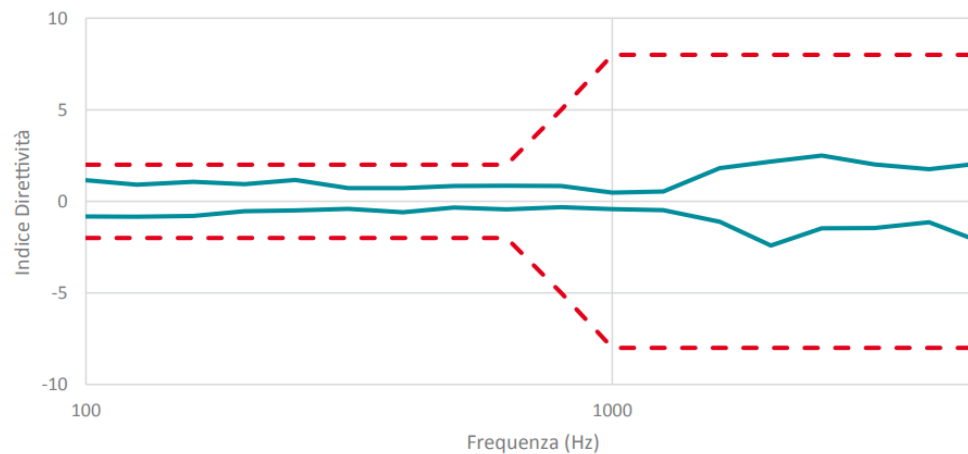
The twelve loudspeakers array composing the OMNI 4" HP is the reason of its remarkable sound power level, preserving the reduced weight of the sound source.

Thanks to the additive manufacturing process, it has been possible to design a solid structure that absorbs shocks and impacts, preserving the dodecahedron's integrity.

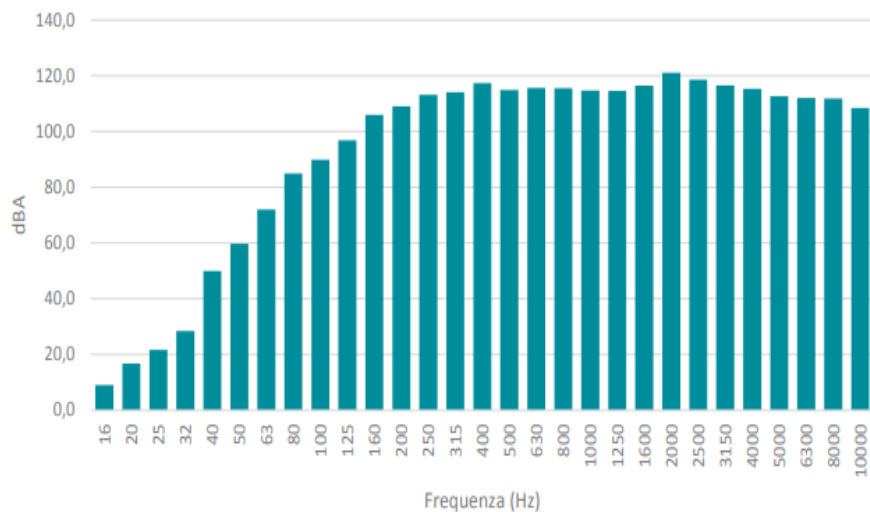
OMNI 4" HP is supplied with 6 meters connecting cable for the amplifier to be moved more easily inside the measurement field.



Directional response - 1/1 octaves



Directivity according to ISO 16283. Upper and lower curves are the ISO 16283 tolerances



Sound power level spectrum - 1/3 octaves

Technical features	
<b>Weight</b>	7.5 Kg
<b>Diameter</b>	280 mm
<b>Lw level</b>	128 dBA
<b>Lp level</b>	119 dB
<b>Lp level (A-weighted)</b>	117 dBA

## OMNI 5''

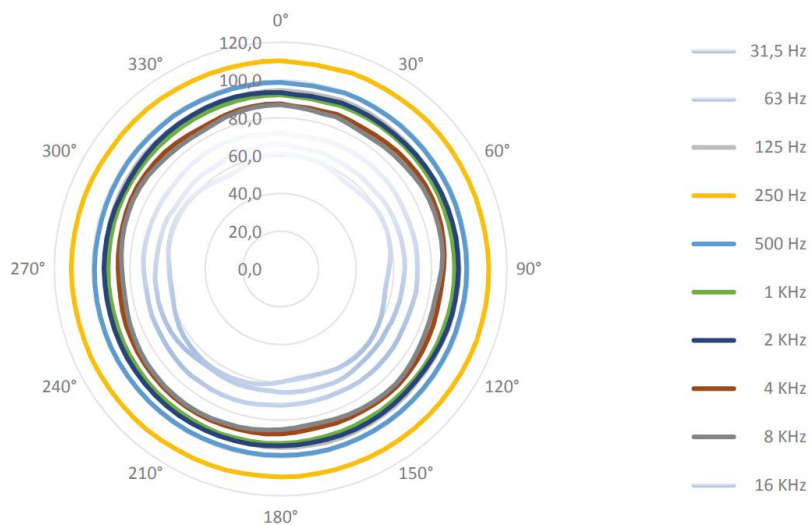


The OMNI 5'' omnidirectional sound source is the traditional design solution that isotropically radiates the sound to achieve a consistent sound field at each angle. It allows correct insulation and reverberation time measurements even in large testing environments.

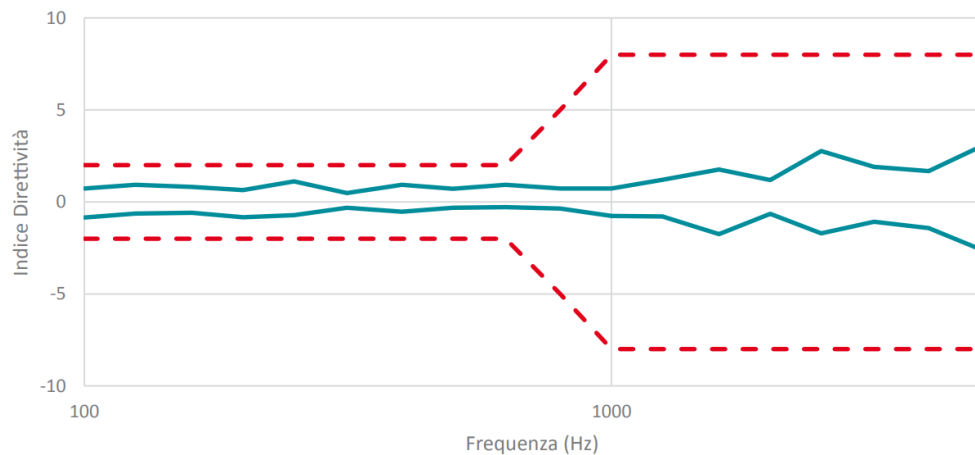
OMNI 5'' is specifically designed to assure the user of a high SPL in the low-frequency range. This feature is a central requirement for testing wide environments.

The wooden structure has been kept to preserve the traditional look of dodecahedrons, accommodating 5 inches loudspeakers.

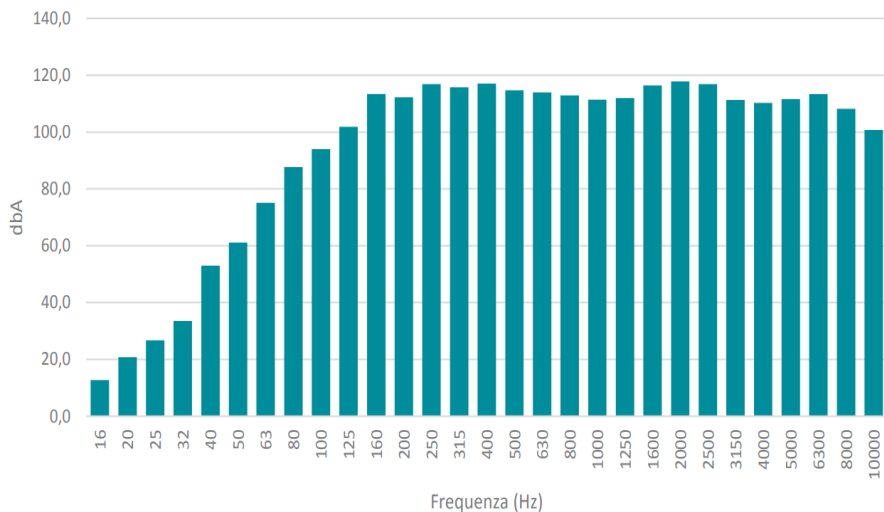
OMNI 5'' is supplied with 6 meters connecting cable for the amplifier to be moved more easily inside the measurement field.



Directional response - 1/1 octaves



Directivity according to ISO 16283. Upper and lower curves are the ISO 16283 tolerances



Sound power level spectrum - 1/3 octaves

Technical features	
<b>Weight</b>	12.5 Kg
<b>Diameter</b>	350 mm
<b>Lw level</b>	127 dBA
<b>Lp level</b>	121 dB
<b>Lp level (A-weighted)</b>	116 dBA



# OMNI 2" XS

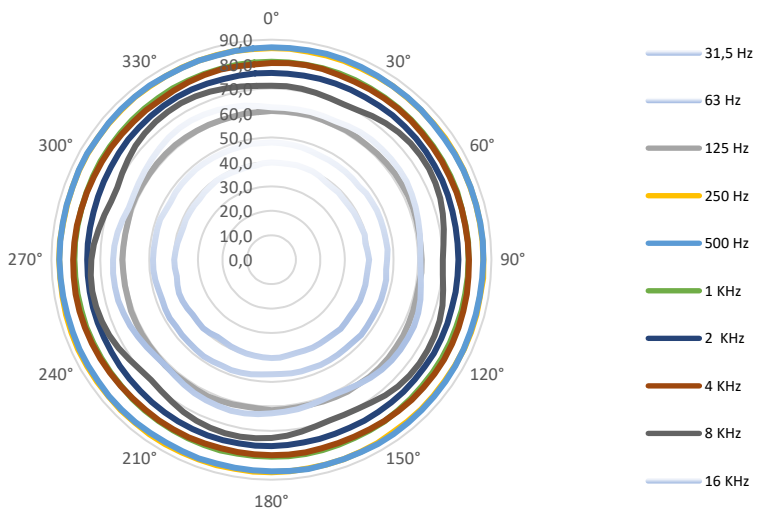


OMNI 2" XS is an omnidirectional sound source composed of an array of twelve 2" loudspeakers, which allows the source to be isotropic at every frequency octave band.

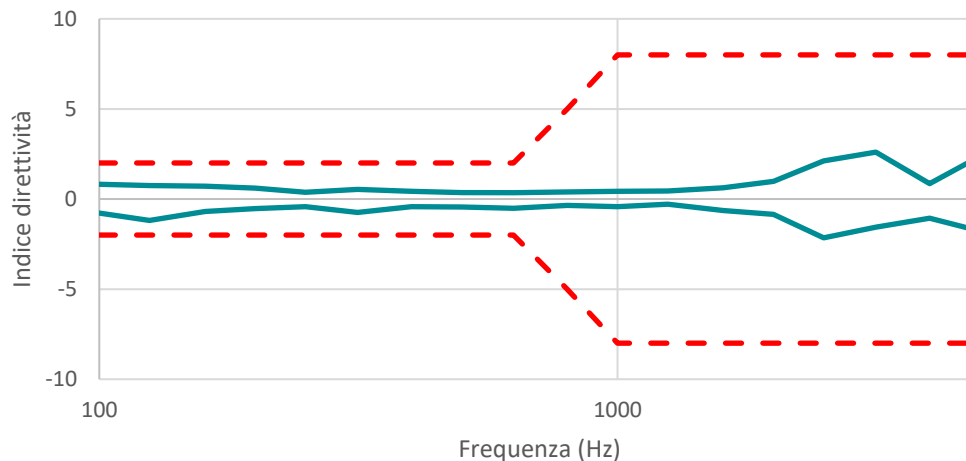
Highly portable and efficient, the OMNI 2" XS sound power is 117 dBA when fed with the AMG mini amplifier and noise generator.

Furthermore, OMNI 2" XS, thanks to its design specifically studied to be compact and efficient, does not require a tripod for support during measurements.

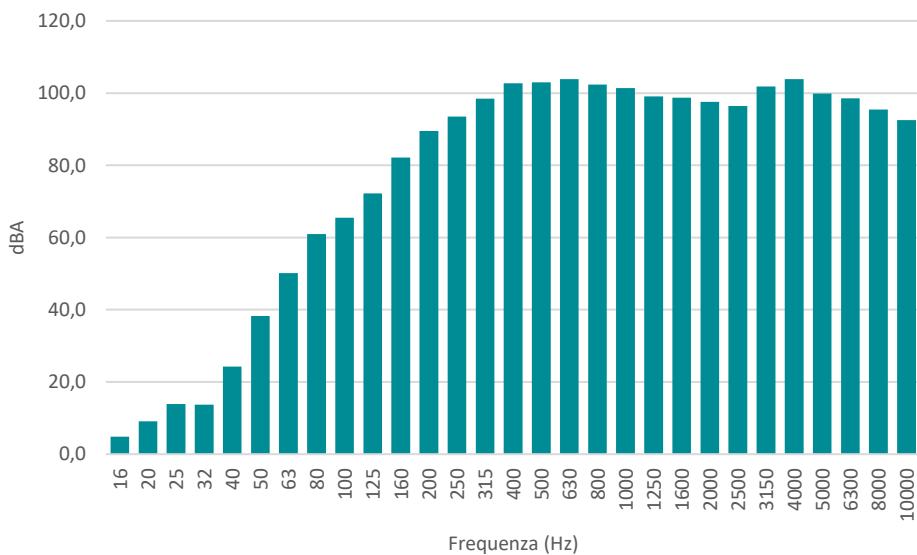
With its 30 cm in height, OMNI 2" XS is, therefore, the solution for tests and measurements ranging from the field of the NVH to the naval, from the aerospace to all those confined environments that generally would not allow the housing of a classic dodecahedron and amplifier.



Directional response - 1/1 octaves



Directivity according to ISO 16283. Upper and lower curves are the ISO 16283 tolerances



Sound power level spectrum - 1/3 octaves

Technical features	
<b>Weight</b>	2.5 Kg
<b>Dimensions</b>	200 x 200 x 300 mm
<b>Lw level</b>	117 dBA
<b>Lp level</b>	107 dB
<b>Lp level (A-weighted)</b>	104 dBA



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