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ABSOLUTE SERIES
LD230 « TDR »

Drawing on proven expertise and the full know-how gained through the development and production of previous versions since the LD210, this latest generation LD230 "TDR" sets a new benchmark for excellence in covering the 20 Hz–200 Hz range. Thanks to its advanced technologies, this 23 cm woofer pushes the limits of what a loudspeaker of this size can achieve: delivering exceptional performance, whether used as an active subwoofer or as the low-frequency driver in ultra high-end speaker systems.

The cone, made from a specific alloy, has been optimized to ensure true piston-like motion across a wide frequency range, even under extreme operating conditions. With its very high rigidity, the aluminum voice coil former reinforces the base of the cone and ensures perfect mechanical transmission. Firmly bonded with a high-performance structural adhesive, these two metal components also contribute actively to voice coil cooling, thereby ensuring exceptional power handling.

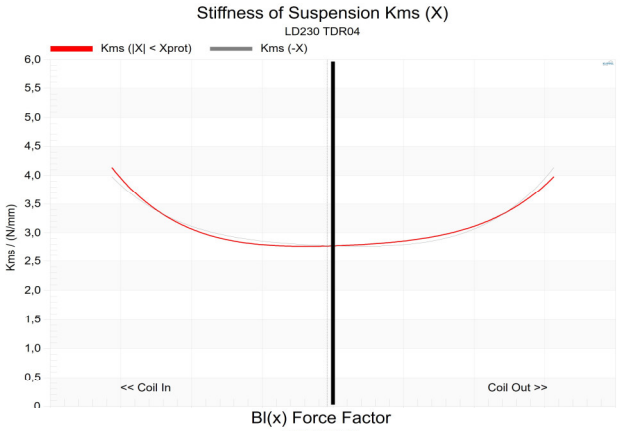
The rubber surrounding, featuring the LDS™ profile, ensures exemplary linearity throughout the nominal excursion range while maintaining perfect geometry under high internal pressures (such as in low-volume sealed enclosures or at the tuning frequency of a ported design). Made from a material with a low creep rate, the spider uses a progressive geometry based on M-GUARD™ technology. Together, these two components behave in a perfectly symmetrical manner during both positive and negative movements, effectively reducing "dynamic sliding offset". They also allow for a very large linear excursion (+/-13 mm), with a significant increase in stiffness beyond that point, acting as a mechanical "limiter / soft clipping" during extreme excursions.

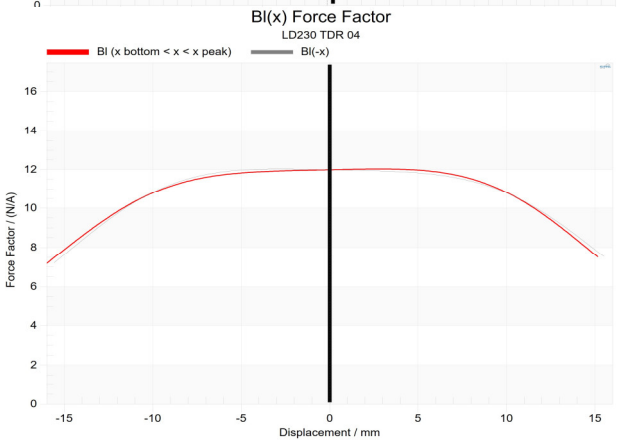
Thanks to our FWI™ technology, the massive motor structure (156×32 mm) delivers a high, symmetrical, and stable force factor over a wide range of excursion and power levels. Precisely engineered using advanced electromagnetic simulations (F.E.A), the pole pieces and the thick demodulation ring have been optimized to concentrate the maximum amount of the magnet's "static" magnetic flux while minimizing interaction with the undesirable "alternating" flux generated by the voice coil. This ensures reduced and linearized inductance values.

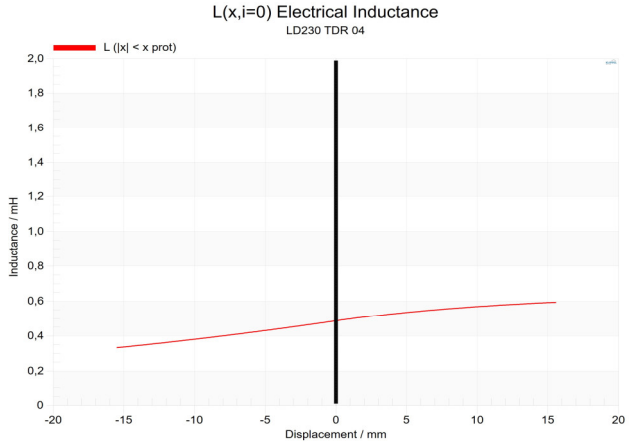
To significantly reduce mechanical noise at high excursion levels and enhance thermal dissipation, the reinforced cast aluminum frame, cone, and voice coil former are all engineered with extensive ventilation openings.

This exceptional driver is available in three versions:

The LD230TDRA04 is designed for use as a single unit in either a bass-reflex or sealed enclosure. The LD230TDR08 version is more specifically intended for bass-reflex applications. The LD230TDR08M version is specifically optimized for low-volume sealed enclosures. In the latter two versions, depending on the intended application and amplifier capability, 2 to 3 units can be configured in parallel.







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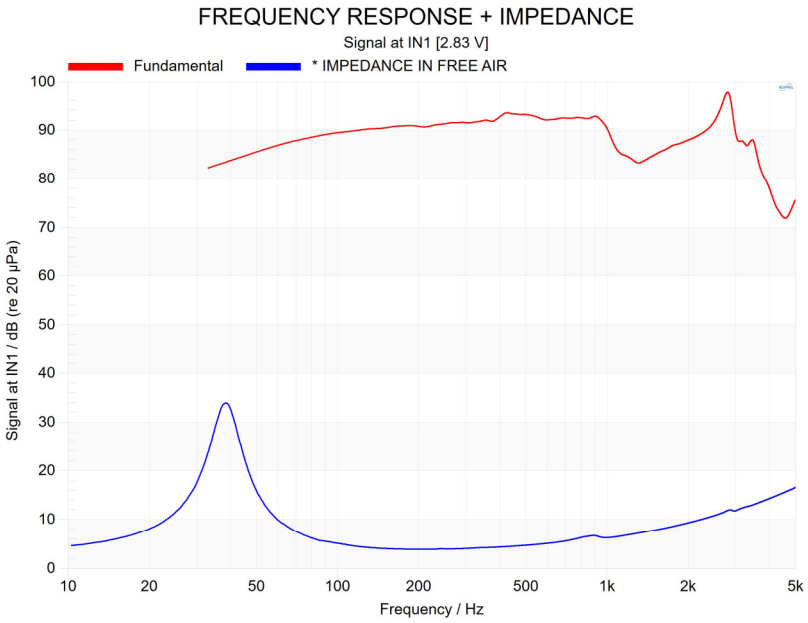
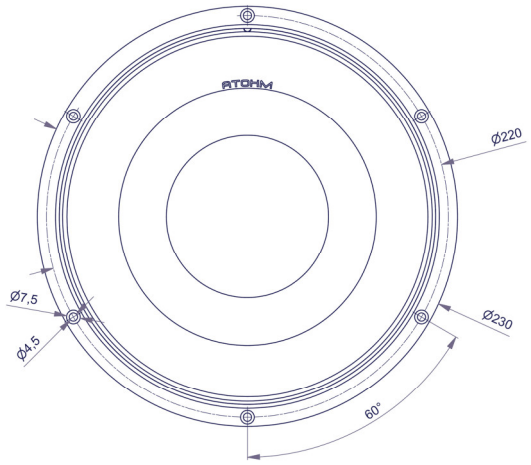
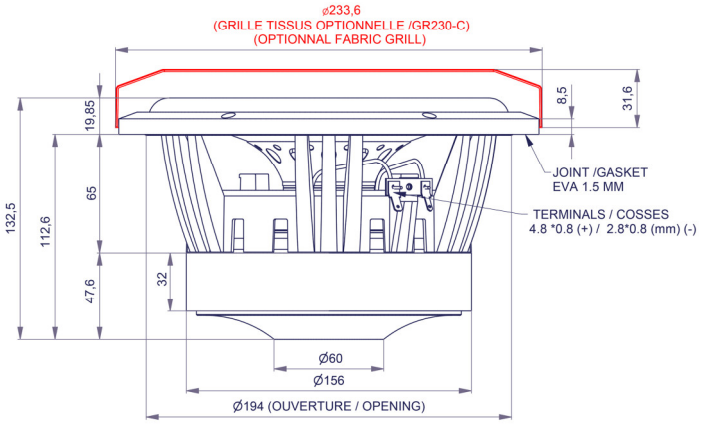
ABSOLUTE SERIES
LD230 TDR 04



Measurement conditions of the frequency response: sweep 2.83Vrms, distance 50cm (compensated 1m), sealed box volume 26L, ground plane

TECHNICAL SPECIFICATIONS	
Power handling	300 Wrms
Short term power handling (1s)	700 Wrms
Sensitivity	91dB/2.83V/1M
Nominal impedance	4 ohms
DC resistance	3 ohms
Emissive surface	240cm²
Coil diameter	50mm
Coil height	32mm
Magnet gap height	6mm
Flux density	12000 gauss
Linear excursion	+/- 13mm
Maximal excursion	+/- 20mm
Recommended roll-off frequency	400 Hz (-6dB)
Weight :	5.6 kg
SMALL SIGNAL PARAMETERS (T/S) – 0.2Veff	
Resonance frequency	38.6 Hz
QTS	0.31
QES	0.34
QMS	3.42
Cms	0.26 mm/N
Mms	68.1 gr
Vas	21 L
BL	12.1 N/A
Le (LR-2 model)	0.47 mH
L2 (LR-2 model)	0.76 mH
R2 (LR-2 model)	2.66 ohms
LARGE SIGNAL PARAMETERS (+/-15mm x=0)	
Resonance frequency	30.8 Hz
Cms	0.39 mm/N
Vas	31L





Small-signal parameters are measured at 0.2 Vrms with maximum precision, using simultaneous monitoring of the voice coil current and the displacement of the moving part (Klippel analyzer, micrometric laser sensor, on a high-stability test bench).
Large-signal parameters are determined through LSI analysis conducted on the same test bench. These are provided for reference only, serving as indicators of the driver's dynamic behavior. They notably reflect the impact of reversible creep in the suspension and spider materials.

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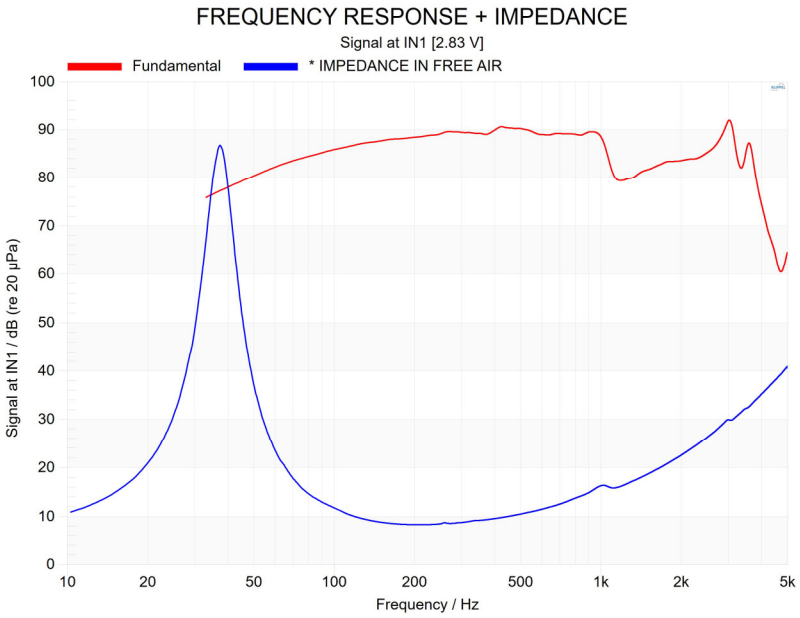
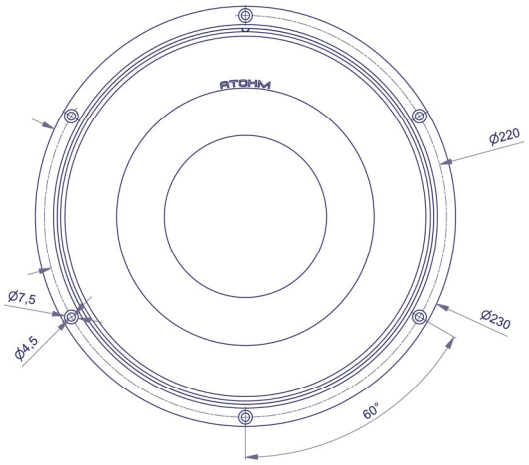
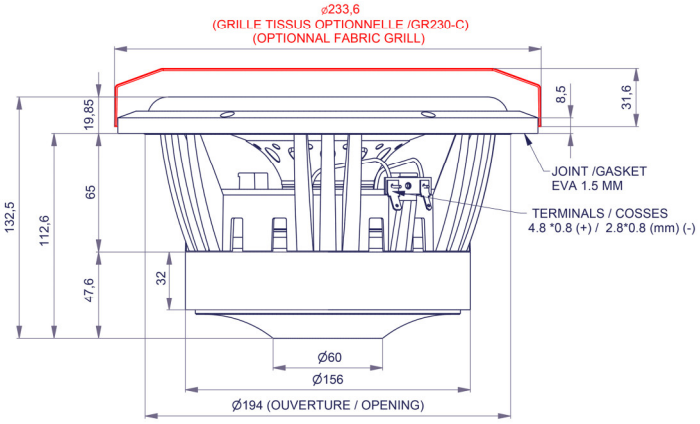
LD230 TDR 08



Measurement conditions of the frequency response: sweep 2.83Vrms, distance 50cm (compensated 1m), sealed box volume 26L, ground plane

TECHNICAL SPECIFICATIONS	
Power handling	300 Wrms
Short term power handling (1s)	700 Wrms
Sensitivity	89dB/2.83V/1M
Nominal impedance	8 ohms
DC resistance	6.4 ohms
Emissive surface	240cm²
Coil diameter	50mm
Coil height	32mm
Magnet gap height	6mm
Flux density	12000 gauss
Linear excursion	+/- 13mm
Maximal excursion	+/- 20mm
Recommended roll-off frequency	400 Hz (-6dB)
Weight :	5.6 kg
SMALL SIGNAL PARAMETERS (T/S) – 0.2Veff	
Resonance frequency	37.5 Hz
QTS	0.26
QES	0.27
QMS	3.46
Cms	0.26 mm/N
Mms	71.2 gr
Vas	21 L
BL	19.9 N/A
Le (LR-2 model)	1.24 mH
L2 (LR-2 model)	1.84 mH
R2 (LR-2 model)	6.3 ohms
LARGE SIGNAL PARAMETERS (+/-15mm x=0)	
Resonance frequency	29 Hz
Cms	0.41 mm/N
Vas	33.5L





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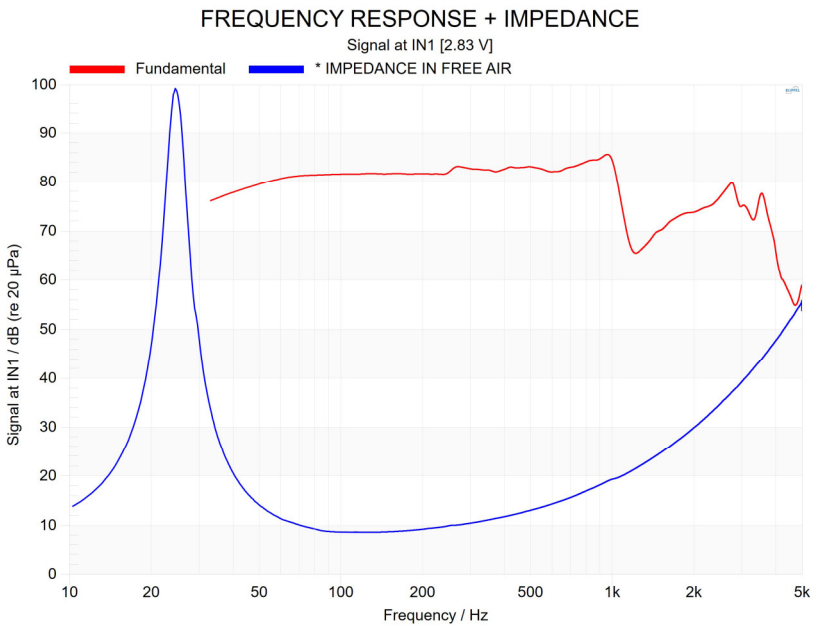
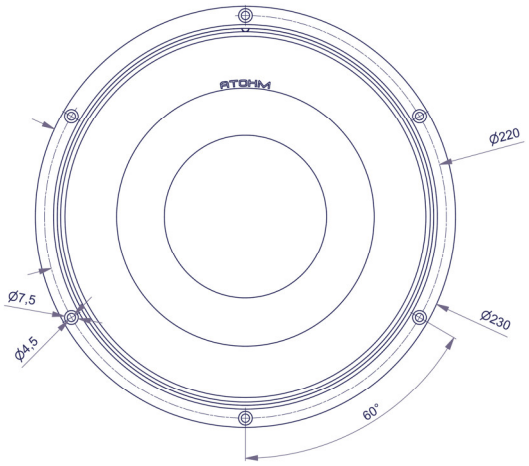
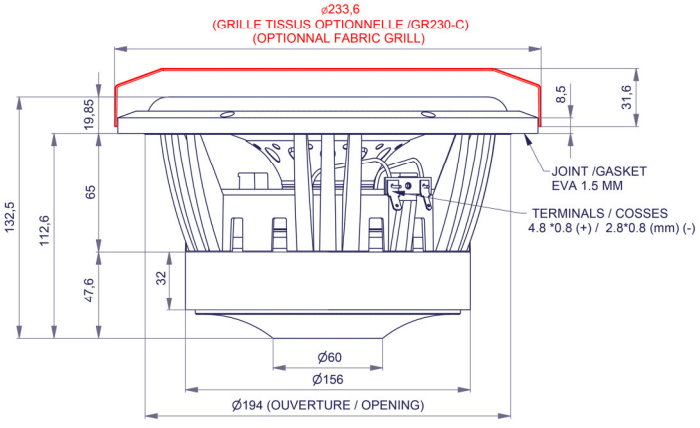
ABSOLUTE SERIES
LD230 TDR 08M



Measurement conditions of the frequency response: sweep 2.83Vrms, distance 50cm (compensated 1m), sealed box volume 26L, ground plane

TECHNICAL SPECIFICATIONS *(This unit is specifically optimized for low-volume sealed enclosures)*	
Power handling	300 Wrms
Short term power handling (1s)	700 Wrms
Sensitivity	83dB/2.83V/1M
Nominal impedance	8 ohms
DC resistance	6.6 ohms
Emissive surface	240cm²
Coil diameter	50mm
Coil height	33.5mm
Magnet gap height	6mm
Flux density	12000 gauss
Linear excursion	+/- 13.75mm
Maximal excursion	+/- 20mm
Recommended roll-off frequency	200 Hz (-6dB)
Weight :	5.6 kg
SMALL SIGNAL PARAMETERS (T/S) – 0.2Veff	
Resonance frequency	26.3 Hz
QTS	0.31
QES	0.34
QMS	3.46
Cms	0.23 mm/N
Mms	155 gr
Vas	20 L
BL	22.4 N/A
Le (LR-2 model)	1.97 mH
L2 (LR-2 model)	2.57 mH
R2 (LR-2 model)	6.54 ohms
LARGE SIGNAL PARAMETERS (+/-15mm x=0)	
Resonance frequency	18.5 Hz
Cms	0.42 mm/N
Vas	35L





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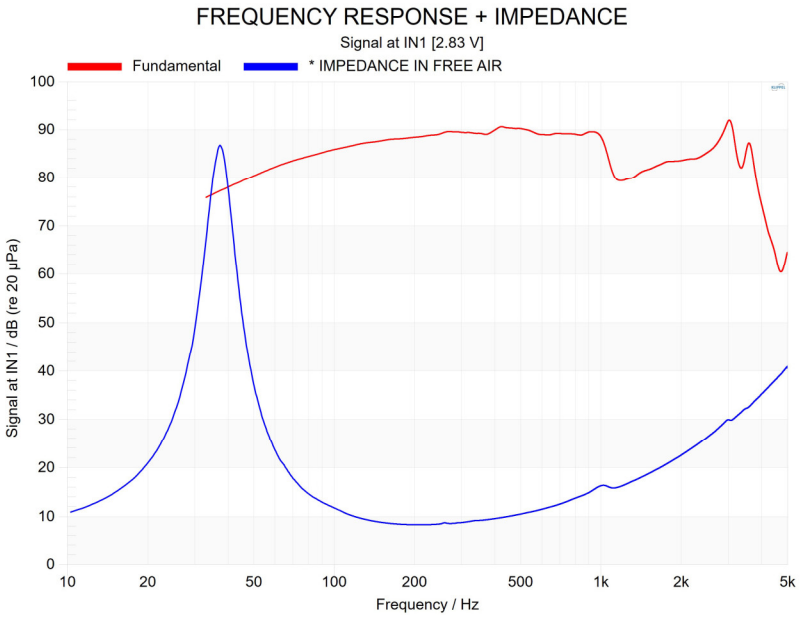
LD230 TDR 08



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TECHNICAL SPECIFICATIONS	
Power handling	300 Wrms
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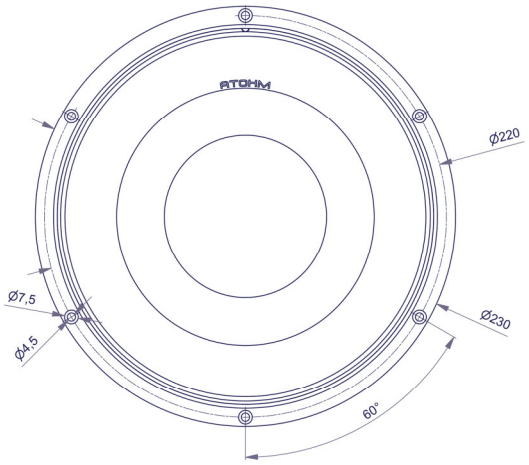

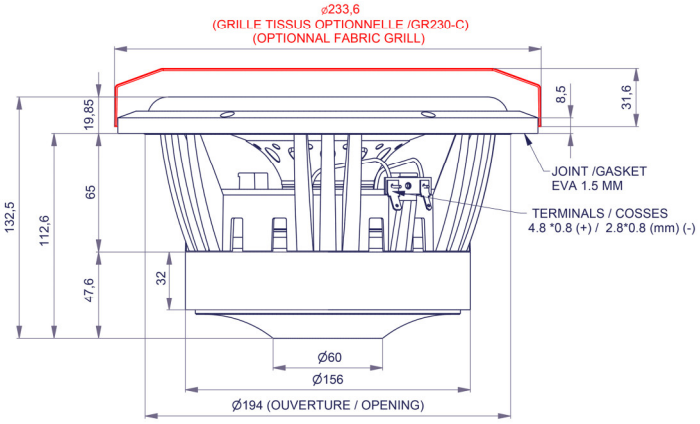

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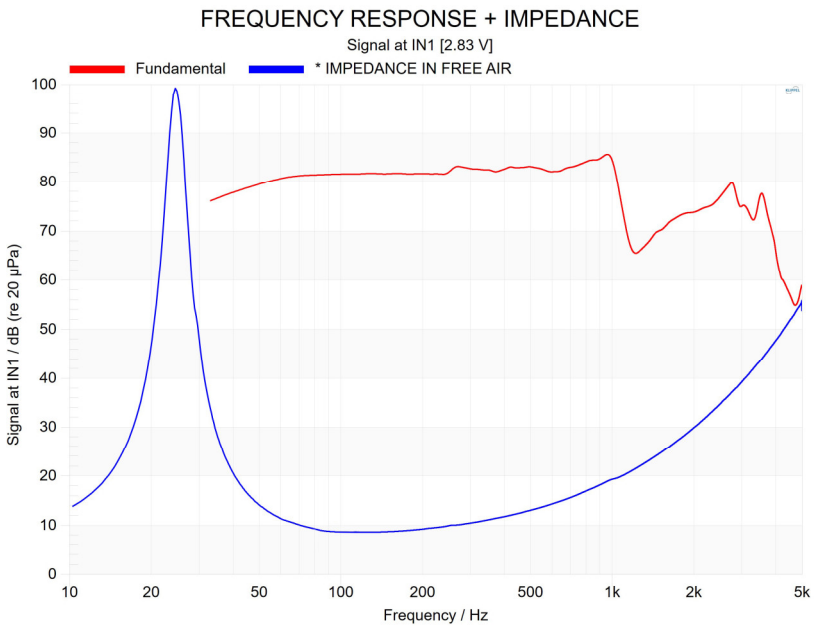

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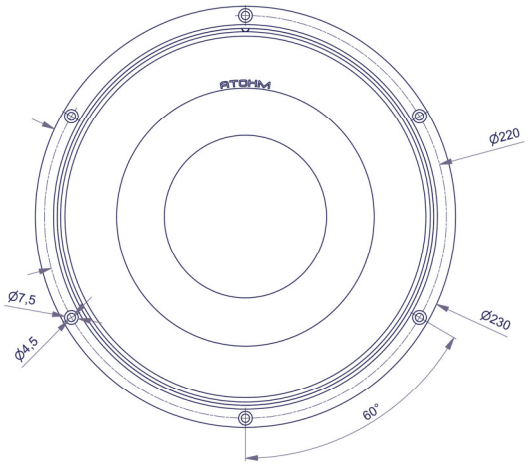

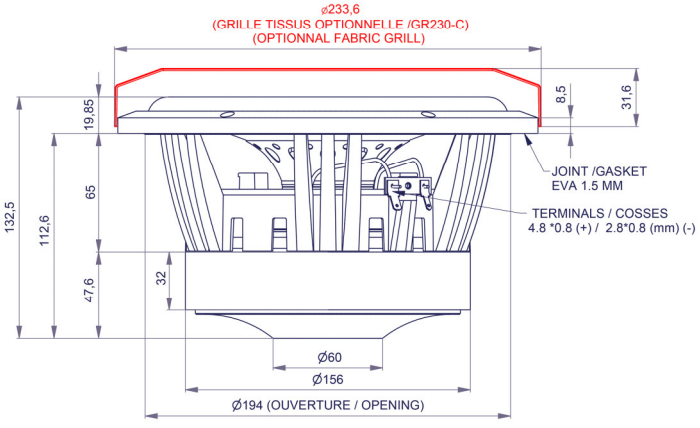

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