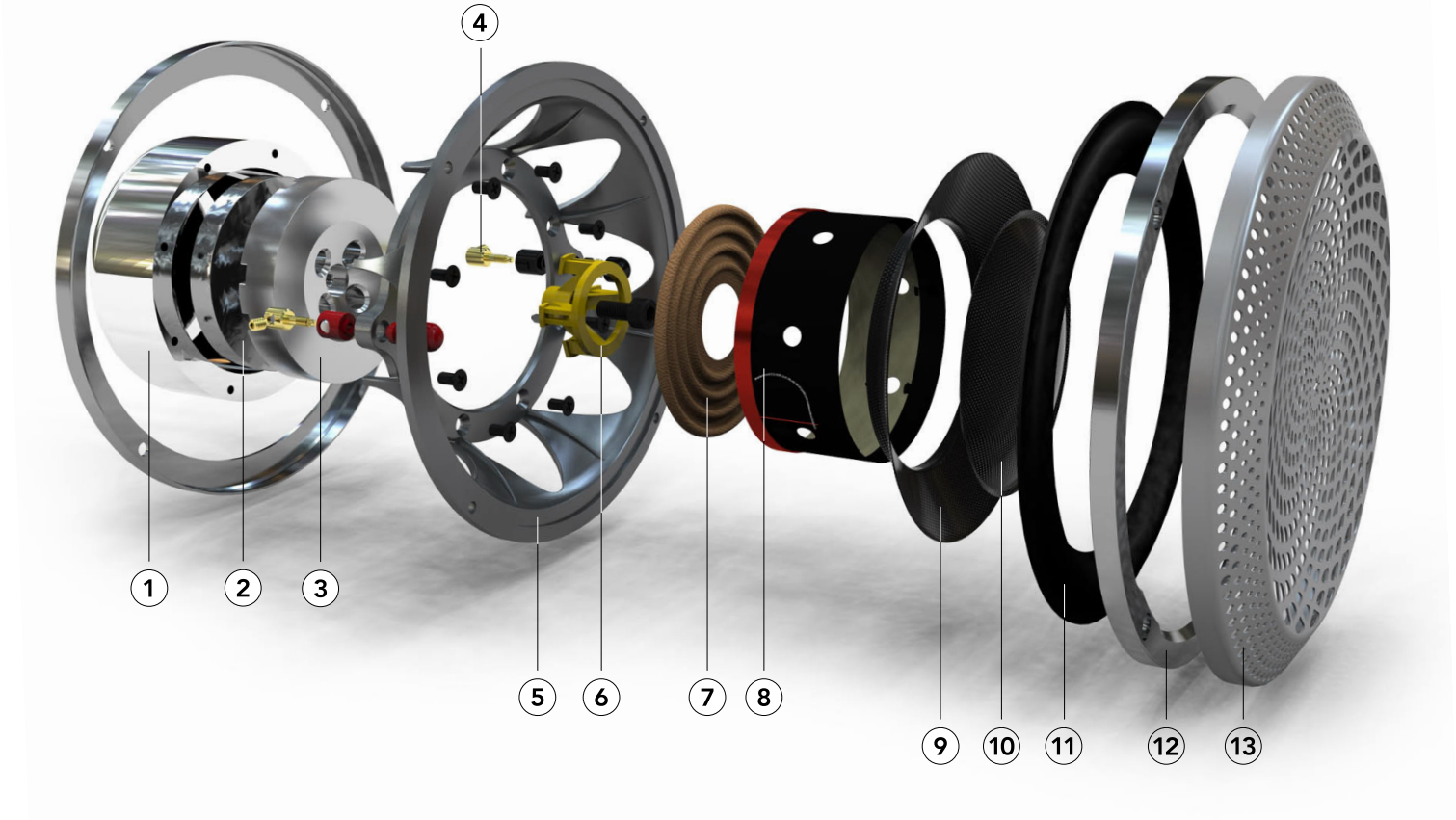
ESB AUDIO

9.6W

6.5”/165 MM HIGH-END MID-WOOFER



1 Pole cup designed with the help of magnetic flux analysis software. It helped to achieve perfect and homogeneous saturation of the magnetic gap for the benefit of the voice coil stroke always immersed in constant magnetic flux, this reduces distortion and increases dynamics.

2 Generously sized neodymium magnet. This very powerful magnet is made from a high-temperature resistant neodymium and allows the size and bulk of the magnetic motor to be greatly reduced. Equivalent magnetic force with a ferrite magnet would require larger dimensions of the speaker itself.

3 Pole yoke with special internal ventilation, ensures a long life for the voice coil.

4 The terminals accept large gauge cables and are thick gold-plated to prevent any loss of the power generated by the amp.

5 The cast-aluminum and powder-coated basket offers very low resistance to the passage of air, and its shape (verified by FEM analysis) reduces vibration and resonance.

6 A special spider device, screwed to the central pole, ensures the spider damper clamping.

7 Conex™ spider damper is inside the voice coil with balanced and progressive stiffness for a perfect controlled ride.

8 An enormously large voice coil ensures power handling among the highest in its class and guarantees unequaled speaker dynamics. The design of this voice coil ensures that it remains for much of its excursion fully immersed in the magnetic field, minimizing distortion. The voice coil former is made of aluminum with ventilation holes and black anodization in order to better dissipate heat. Underhung voice coil: the length of the voice coil winding is shorter than the height of the magnetic gap. This design allows lower distortion at lower excursions and more precise control over the movement of the voice coil.

9 The cone is made of high modulus carbon molded under vacuum and autoclave, a technology rarely used in speakers because of its cost, but brings enormous benefits in terms of naturalness of reproduction and high transient dynamics.

10 Structural dust cup, as cone, is made by vacuum and autoclave molded high-modulus carbon.

11 The NBL rubber edge has a shape designed to ensure very smooth movement at very low excursion, becoming increasingly controlled as the excursion increases and approaches the limit. This, too, helps to make this speaker extremely dynamic and capable of handling large powers.

12 CNC-machined aluminum ring secures the rubber suspension on the edge, ensuring perfect fastening and centering, avoiding glue alone.

13 CNC-machined aluminum grille.

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GENERAL DATA

Overall dimension: 165 × 77 mm
Nominal power handling (AES)*: 180 W
Transient power*: 360 W
Sensitivity 1W/1m: 88.5 dB SPL
Frequency response: 48 - 5.000 Hz

*Nominal and transient power
@ High Pass 80Hz – 12db/Oct

ELECTRICAL DATA

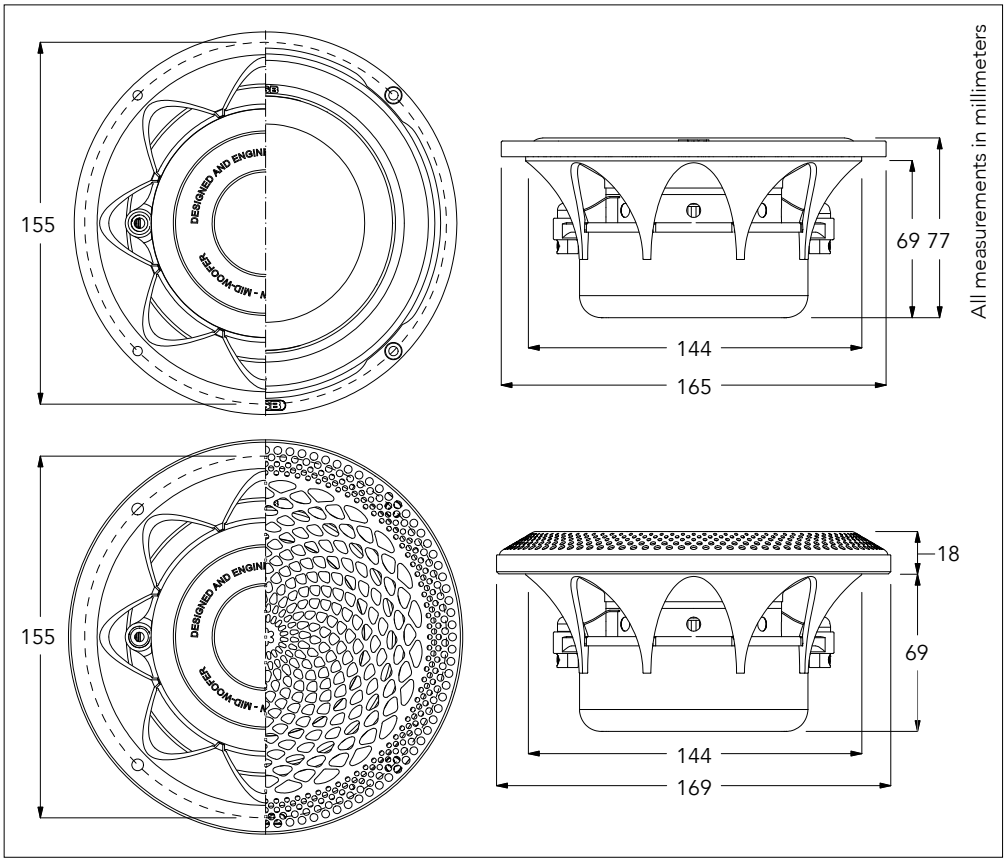
Nominal impedance: 4Ω
DC Resistance: 3.6Ω
Voice coil inductance (Lbm): 110 µH

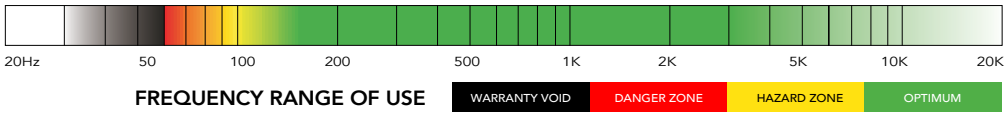
VC AND MAGNET PARAMETERS

Voice coil diameter: 75 mm
Voice coil height: 5.5 mm
Magnetic gap height (HE): 16 mm
Max linear excursion (Xmax): 5.25 mm
VC former material: 7000 Aluminum Alloy
Number of layers: 2
Magnet system: Neodymium N52-H
Efficiency (η_0): 0.427 %
BL product (BxL): 6.375 Na

T&S PARAMETERS

Suspension compliance (Cms): 399 N/m
Mechanical Q factor (Qms): 2.202
Electrical Q factor (Qes): 0.569
Total Q factor (Qts): 0.452
Moving mass (Mms): 16.5 g
Eq. compliance air load (Vas): 10.5 Lt
Resonance frequency (Fs): 61.9 Hz
Effective piston area (Sd): 13.62 cm^2





FREQUENCY RANGE OF USE

WARRANTY VOID | DANGER ZONE | HAZARD ZONE | OPTIMUM

FREQUENCY RESPONSE vs IMPEDANCE