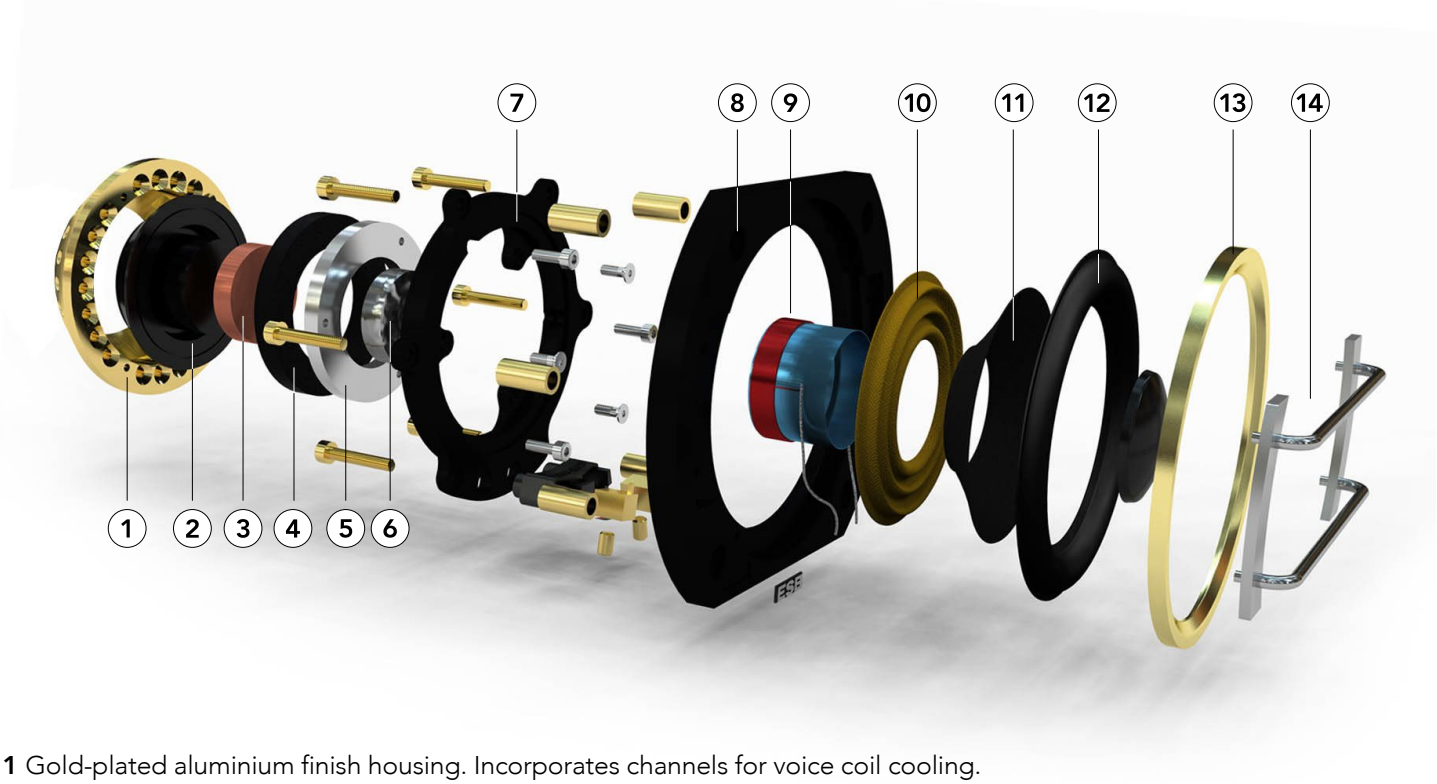
ESB AUDIO

8.075

3”/75 MM HIGH-END MIDRANGE



1 Gold-plated aluminium finish housing. Incorporates channels for voice coil cooling.

2 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.

3 A pure copper ring was added to reduce harmonic distortions.

4 The neodymium magnet motor is optimized with FEA simulation to ensure perfectly symmetrical magnetic flux in both directions of the cone’s run. Motor metal parts are CNC machined from solid, refined material for maximum magnetic flux linearity and minimum magnetic loss. This reduces distortion at high power levels.

5 Magnet plate in ultra-low-carbon steel.

6 Secondary high grade neodymium magnet. This works together with the main magnet, and in addition to significantly increasing the magnetic force, increasing the efficiency of the loudspeaker while simultaneously reducing distortion, it controls the magnetic flux lines, helping to concentrate them only in the voice coil area.

7 CNC-machined billet aluminum flange.

8 CNC machined billet aluminum front face-plate.

9 The 25.5 mm CCAW (Copper Clad Aluminum Wire) double layer voice coil is wound on an aluminum former for exceptional power handling and compression-free reproduction, even for the most demanding musical passages.

10 The large Conex™ spider allows a smooth and gentle run at low excursions and gently holds the cone at high excursions, thus increasing its useful range of use.

11 Non pressed cellulose pulp exponential cone with a vinylester resin coating ensures a perfect balance between rigidity, weight, and self-damping. The cellulose pulp guarantees an extremely natural and linear reproduction in all musical passages with an excellent extension at high frequencies without audible break-up. An aluminum dust cup fixed directly on the voice coil former increases and linearizes the extreme top of the bandwidth.

12 The exclusive rubber surround offers maximum linearity of travel and high reliability in extreme conditions.

13 Finishing brass polished ring.

14 Light stainless still grill for cone protection.

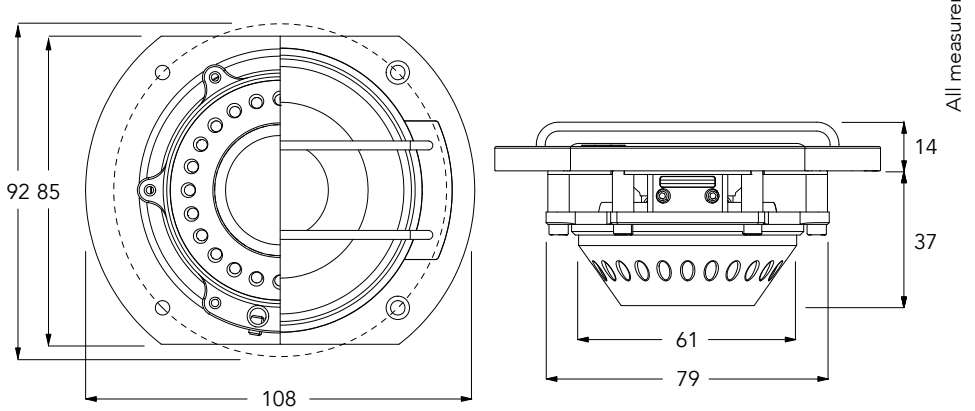
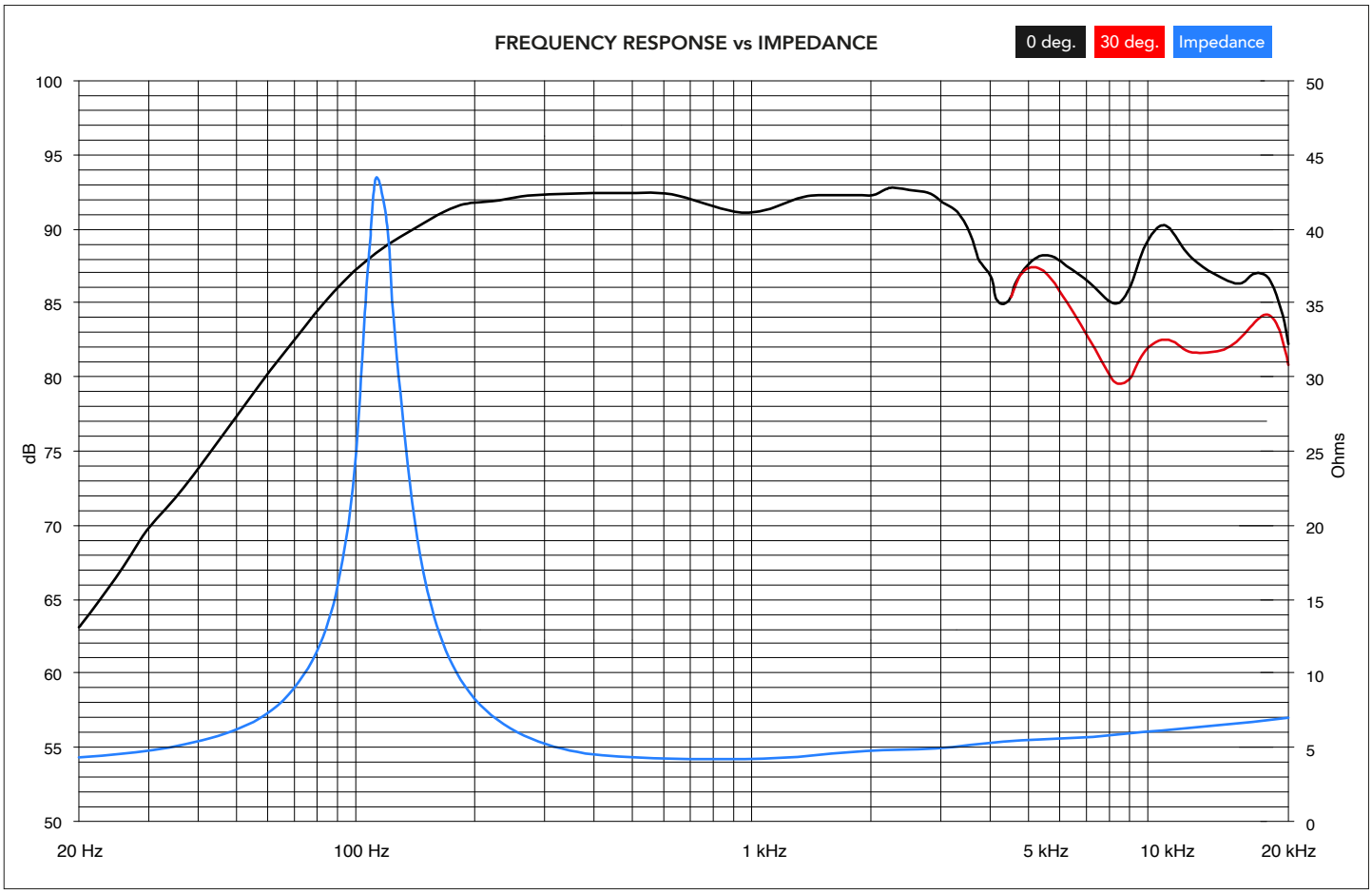
8.075

3”/75 MM HIGH-END MIDRANGE

Speaker Type: Component Midrange
Nominal Diameter: 3”/75 mm
Nominal Impedance (Znom): 4 Ohms
Continuous Power Handling: 120 W
Peak Power Handling: 240 W
Rec. Amplifier Power: 50 - 160W (RMS)

PARAMETERS

Voice Coil Resistance (Re): 3.3 Ohms
Voice Coil Diameter: 25.5 mm
Free Air Resonance (Fs): 113 Hz
Reference Efficiency (no): 0,25 %
Sensitivity: 91 dB @ 1W/1m
94 dB @ 2.83V/1m
Electrical “Q” (Qes): 0.42
Mechanical “Q” (Qms): 4.76
Total Speaker “Q” (Qts): 0.39
Equivalent Compliance (Vas): 0.95 lt
Moving Mass (Mms): 2.45 g
Mech. Compliance (Cms): 0.8 mm/N
Magnetic Strength (BL): 3.83 N/A
Effective Piston Area (Sd): 29 sq. cm
One-Way Linear Excursion (Xmax): 0.87 mm

DESIGN BANDWIDTH

With 48 dB/oct. HP filters: 114 Hz - 14 KHz
With 24 dB/oct. HP filters: 140 Hz - 14 KHz
With 12 dB/oct. HP filters: 160 Hz - 14 KHz