C18EN002/A
E0060-08/06

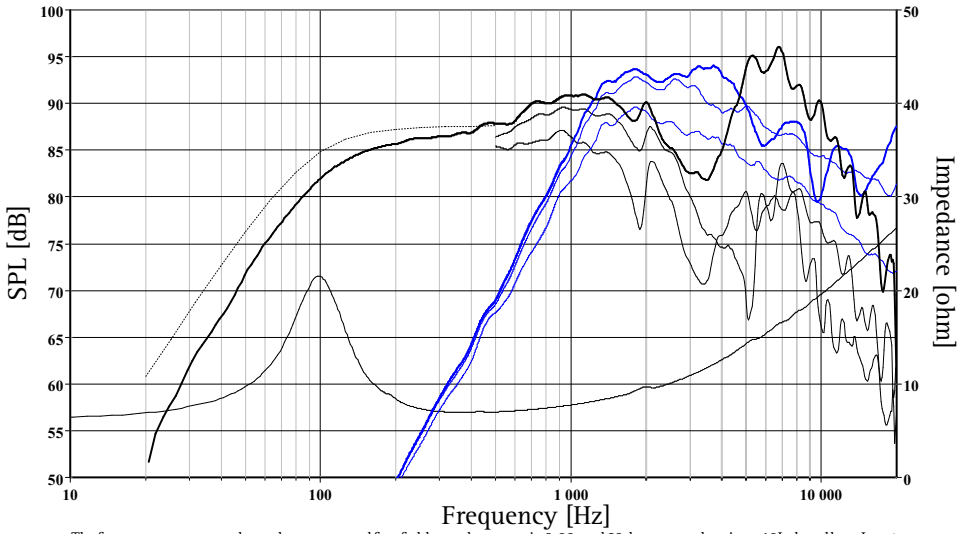
A low-mass, surface-treated aluminium/magnesium alloy cone behaves like a piston throughout the audible frequency range, without any sign of midrange resonances.

The coaxially mounted aluminium/magnesium alloy dome tweeter has a low resonance frequency, and integrates with the cone driver to form a point source.

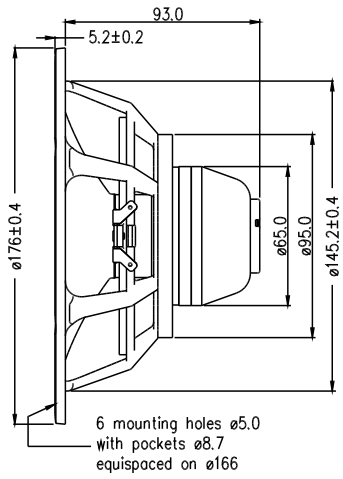
The cone profile has been carefully designed to optimally load the tweeter's radiation. A completely new rubber surround reduces resonances and prevents surround break up in the midrange band. The surround's small inverted roll, combined with a profile that follows the shape of the cone, results in almost total elimination of diffraction effects on the tweeter's output.

The powerful neodymium magnet system, with its small profile and optimal shape, results in high midrange sensitivity with minimal back wave reflections. Heavy copper rings mounted above and below the T-shaped pole piece reduce nonlinear and modulation distortion and increase overload margin. The crown-shaped copper tweeter support ring eliminates any resonance coming from the cavity between the tweeter body and midrange voice coil former.

All of these features work together to provide a smooth and well behaved off-axis response throughout the entire operating range.



The frequency responses above show measured free field sound pressure in 0, 30, and 60 degrees angle using a 12L closed box. Input 2.83 Vrms, microphone distance 0.5m, normalized to SPL 1m. The dotted line is a calculated response in infinite baffle based on the parameters given for this specific driver. The impedance is measured in free air without baffle using a 2V sine signal.



	Midrange	Tweeter		Midrange	Tweeter
Nominal Impedance	8 Ohms	6 Ohms	Voice Coil Resistance	6.2 Ohms	5 Ohms
Recommended Frequency Range	150-3000Hz	2000-25000	Voice Coil Inductance	0.62 mH	0.05 mH
Short Term Power Handling *	250 W	200 W	Force Factor	8.8 N/A	3.1 N/A
Long Term Power Handling *	100 W	90 W	Free Air Resonance	98 Hz	1430 Hz
Characteristic Sensitivity (2.83V, 1m)	87 dB	90 dB	Moving Mass excl. air	15.7 g	0.4 g
Voice Coil Diameter	39 mm	26 mm	Air Load Mass In IEC Baffle	1.69 g	-
Voice Coil Height	12 mm	1.6 mm	Suspension Compliance	0.17mm/N	-
Air Gap Height	6 mm	2.0 mm	Suspension Mechanical Resistance	4.95 Ns/m	-
Linear Coil Travel (p-p)	6 mm	0.4 mm	Effective Piston Area	131 cm^2	7 cm^2
Maximum Coil Travel (p-p)	12 mm	-	VAS	3.7 Litres	-
Magnetic Gap Flux Density	1.1 T	1.56 T	QMS	2.16	-
Magnet Weight	0.95 kg	-	QES	0.86	-
Total Weight	1.44 kg	-	QTS	0.62	-