## Woofer Esotar<sup>2</sup> 650

The Esotar<sup>2</sup> 650 is a 17 cm (6.5") diameter mid/bass driver that is built on a rigid, die-cast solid aluminum frame and features Dynaudio's characteristic MSP (Magnesium Silicate Polymer) diaphragm.

The MSP cone is a proprietary Dynaudio innovation, made in-house and featuring precisely-shaped, geometrically-optimized form to enable the smooth, optimized sound dispersion.

The voice coil diameter is exceptionally large at 75 mm, but by using extremely light aluminum wire wound on a Kapton former, the coil remains extremely lightweight to enable ultra-fast movement. The large coil enables the magnet to be positioned inside the coil, allowing for a larger and more homogenous magnetic field to be utilized. In conjunction with the incredibly powerful, high-efficiency neodymium magnet, this low-mass driver construction provides excellent transient response, incredible speed and unmatched precision.

When used as part of a two-way speaker system, the midrange resolution of the Esotar<sup>2</sup> 650 is simply beyond reproach; mid-bass remains taught and accurate while always exhibiting perfect control at all volume levels. The Esotar<sup>2</sup> 650 perfectly reflects the innovation and performance that have established the Dynaudio Esotar drivers as the most advanced high-performance transducers available.



#### Thiele Small Parameters

	Nominal impedance	Znom	4 Ω
	DC resistance	Re	3.4 Ω
	Voice coil inductance	Le	0.33 mH
	Resonance frequency	fs	49.6 Hz
	Mechanical Q factor	Qms	6.2
	Electrical Q factor	Qes	0.47
	Total Q factor	Qts	0.44
	Mechanical resistance	Rms	1 kg/s
	Moving mass (incl. air load)	Mms	20 g
	Suspension compliance	Cms	0.52 mm/N
	Effective dome diameter	d	123 mm
	Effective piston area	Sd	120 cm <sup>2</sup>
	Equivalent volume	Vas	10.5 l
	Force factor	BL	6.73 Tm
	Recommended frequency range		50–4000 Hz
	Magnet and Voice Coil Properties		
	Voice coil diameter	dc	75 mm
	Voice coil height	hc	14 mm
	Linear excursion, peak to peak		9 mm
	Max. excursion, peak to peak		21 mm
	Power Handling		
	Nominal long term IEC		200 W
	Transient (10 ms)		1000 W
Mechanical Properties			
	Net weight		1.25 kg
	Overall dimension		ø 169 x 78 mm
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Impedance compensation circu





### B: Frequency Response, Magn dB re 20.00µPa/V





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### SPL

Red line: on-axis response Green line: 30° horizontal Blue line: 60° horizontal

Measurement conditions: Level: 2.83 V Distance: 1 m Box volume: 15.6 I

### Impedance

(with and without impedance correction circuit)

Red line: impedance, free air Green line: impedance, free air with compensation.

Measurement conditions: Level: 3.16 V, 50 ohm Driver in free air

#### Facts

Diaphragm and dust cap moulded as one piece

Large 75 mm voice coil ensures high power handling

Internal double nedymium magnet system with vented pole piece

Aluminium voice coil wire provides for a low moving mass, wound on kapton former in a car

Rigid die-cast chassis with aerodynamically shaped ribs

Materials and parameters are optimized for the harsh environmental conditions in a car

Smooth high-frequency roll-off

Natural midrange reproduction

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