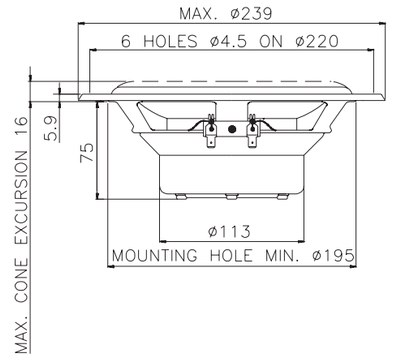
Woofer Esotec MW 182

The new Esotec MW 182 is a large 24 cm (10 inch) diameter mid/woofer equipped with an extremely large, 100 mm (4 inch) diameter voice coil with a dual centered magnet system driving the MSP cone to ensure the greatest possible power handling. This impressive driver is ideally suited for woofer or subwoofer applications in any high quality car audio system.

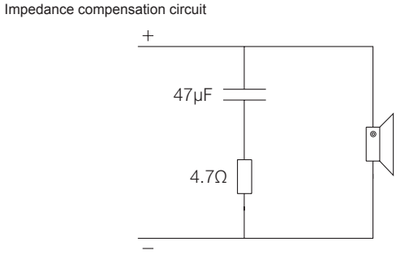
To achieve the lowest possible moving mass, as is the case with all Dynaudio voice coil designs, the unique oversized voice coils are made of pure aluminum while the voice coil wire is itself wound in Dynaudio's proprietary technique. Via an inimitable winding method, the lightweight aluminum coils are coated with a special thermoplastic material. The coils are then processed in such a way that the coil expands and contracts until the wires have reformed into a solid mass of wire. By this method, an extremely durable and stable coil is made, one not subject to warping and other problems commonly associated with traditional loudspeaker voice coils. Concurrently, the density of the winding within the magnetic gap is increased, as is the efficiency of the driver.

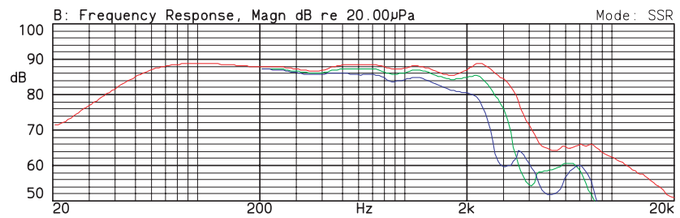
The MW 182 is suited for a wide array of installation enclosures, both sealed as well as vented. The long linear excursion of the ultra low distortion MSP cone is perfectly complemented by the mechanical integrity of the rigid steel basket. In conjunction with the extremely large voice coil, the MW 182 delivers not only high power handling but also a deep, tight and detailed reproduction of bass free of any compression.



Thiele Small Parameters		
Nominal impedance	Znom	4 Ω
DC resistance	Re	3.7 Ω
Voice coil inductance	Le	0.5 mH
Resonance frequency	fs	40 Hz
Mechanical Q factor	Qms	2.8
Electrical Q factor	Qes	0.84
Total Q factor	Qts	0.64
Mechanical resistance	Rms	3.3 kg/s
Moving mass (incl. air load)	Mms	36.5 g
Suspension compliance	Cms	0.43 mm/N
Effective dome diameter	d	173 mm
Effective piston area	Sd	235 cm²
Equivalent volume	Vas	34 l
Force factor	BL	6.4 Tm
Recommended frequency range		30–2000 Hz
Magnet and Voice Coil Properties		
Voice coil diameter	dc	100 mm
Voice coil height	hc	17 mm
Linear excursion, peak to peak		9 mm
Max. excursion, peak to peak		26 mm
Power Handling		
Nominal long term IEC		180 W
Transient (10 ms)		1000 W
Mechanical Properties		
Net weight		1.85 kg
Overall dimension		ø 239 x 86 mm

Impedance compensation circuit

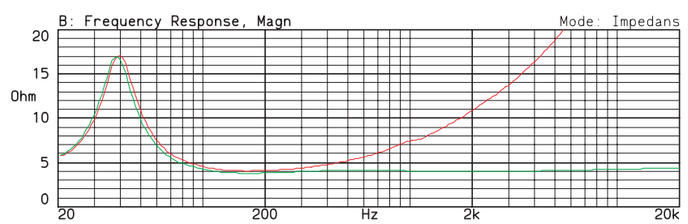




SPL

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

Measurement conditions:
Level: 2.83 V
Distance: 1 m
Box volume: 25 l



Impedance

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

Measurement conditions:
Level: 2 V, 10 ohm
Driver in free air

Facts

Diaphragm and dust cap moulded as one piece

Very large 100 mm voice coil ensures high power handling

Internal magnet structure with vented pole piece

Long linear excursion

Aluminium voice coil wire provides for a low moving mass

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