

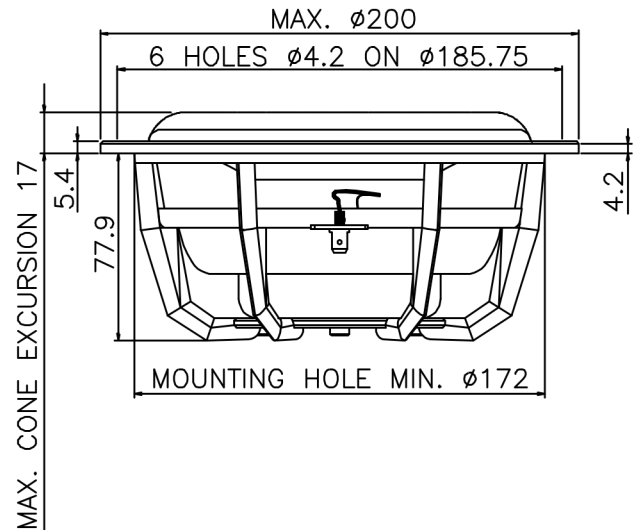
Woofers Esotec MW 172

The MW 172 is a medium sized woofer suitable for both 2- and 3-way installations.

The driver works well in a wide variety of enclosures, closed as well as vented.

The driver has a unique combination of smooth frequency response, low distortion and powerful bass. This ensures outstanding sonic performance.

- Diaphragm and dust cap moulded as one piece
- Very large 75 mm voice coil ensures high power handling
- Internal double magnet system with vented pole piece
- Aluminium voice coil wire provides for a low moving mass
- Rigid die-cast chassis with aerodynamically shaped ribs
- Materials and parameters are optimized for the harsh environmental conditions in a car
- Natural midrange reproduction
- Smooth high-frequency roll-off



Thiele Small Parameters		
Nominal impedance	Z _{nom}	4 Ω
DC resistance	R _e	3.2 Ω
Voice coil inductance	L _e	0.27 mH
Resonance frequency	f _s	45 Hz
Mechanical Q factor	Q _{ms}	2.3
Electrical Q factor	Q _{es}	0.65
Total Q factor	Q _{ts}	0.51
Mechanical resistance	R _{ms}	2.6 kg/s
Moving mass (incl. airload)	M _{ms}	21.4 g
Suspension compliance	C _{ms}	0.58 mm/N
Effective cone diameter	d	151 mm
Effective piston area	S _d	180 cm ²
Equivalent volume	V _{as}	27 l
Force factor	Bl	5.4 Tm
Recommended frequency range	35-3500 Hz	
Recommended closed box volume	14-42 l	

Magnet and Voice Coil Properties		
Voice coil diameter	dc	75 mm
Voice coil height	hc	14 mm
Voice coil layers	nc	2
Magnetic gap height	hg	5 mm
Linear excursion, peak to peak		9 mm
Max. excursion, peak to peak		15 mm
Magnet weight	w _m	0.53 kg

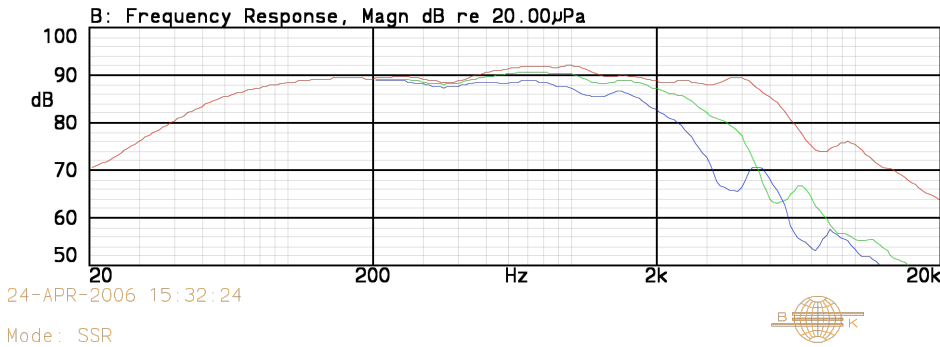
Power Handling	
Nominal long term IEC	150 W
Transient (10 ms)	1000 W

Mechanical Properties	
Net weight	1.3 kg
Overall dimension	ø200x88 mm

All specifications subject to change without notice

Woofers Esotec MW 172

Frequency response • on-axis, 30° and 60° off-axis

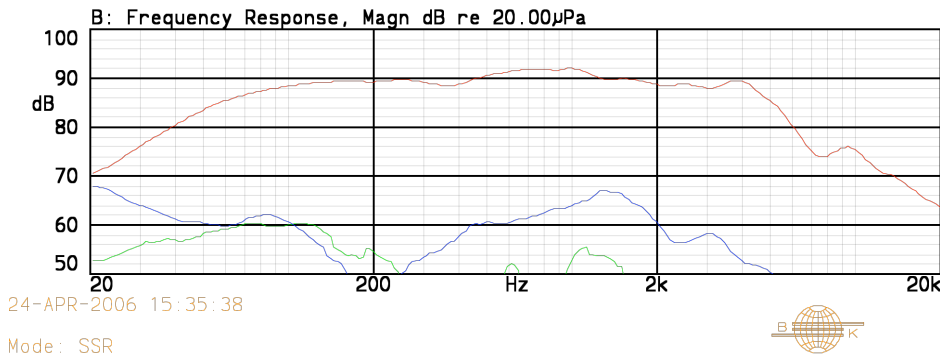


Red line: on-axis response
Green line: 30° horizontal
Blue line: 60° horizontal

Measurement conditions

Level: 2.83 V
Distance: 1 m
Box volume: 18 l

Frequency response • 2nd and 3rd harmonic distortion



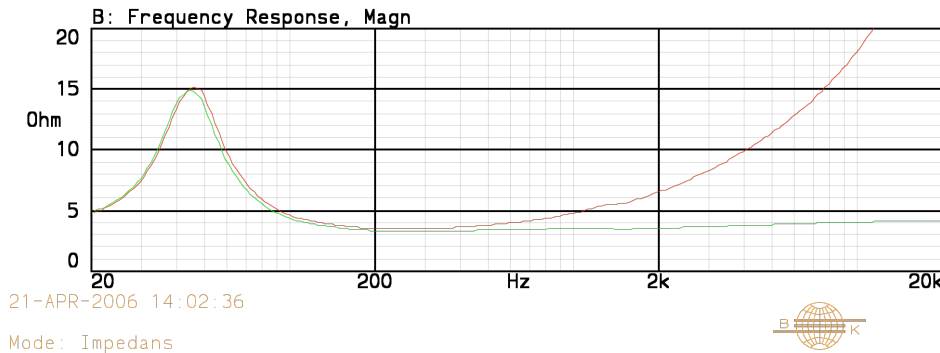
Red line: on-axis response
Green line: 2nd harmonic
Blue line: 3rd harmonic

2nd and 3rd harmonic raised 20 dB

Measurement conditions

Level: 2.83 V
Distance: 1 m
Box volume: 18 l

Impedance • with and without impedance correction circuit



Red line: impedance, free air
Green line: impedance, free air with compensation. See drawing below.

Measurement conditions

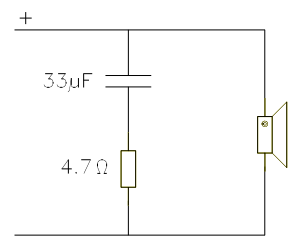
Level: 2 V, 10 ohm
Driver in free air

The frequency response curves exhibit the MW 172 as a well behaved driver with good dispersion, smooth frequency response and an extraordinary absence of resonance's, which makes it possible to create a high quality 2-way system, even with this fairly large woofer.

The impedance curves show that the driver is a simple load for the amplifier. The use of an impedance correction circuit will make it even more simple.

The low suspension compliance makes the driver suitable for small enclosures normally used in cars while also allowing for mounting without an enclosure, e.g. in a hat shelf.

Impedance correction circuit



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