

PROFESSIONAL LOUDSPEAKERS www.beyma.com

10MC500

LOW & MID FREQUENCY TRANSDUCER

KEY FEATURES

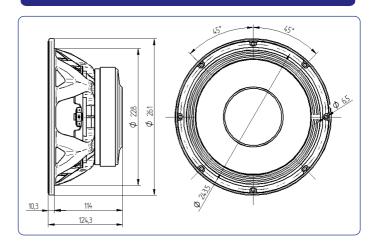
- High power handling: 1000 W program power
- 2,5" copper wire voice coil
- Beyma's Malt Cross® ultimate Cooling System
- Low power compression losses
- High sensitivity: 97 dB
- FEA optimized magnetic circuit
- Designed with MMSS technology for high control, linearity and low harmonic distortion. LSI optimized parameters
- Waterproof cone with treatment for both sides of the cone
- Extended controlled displacement: X_{max} ± 8 mm
- Massive mechanical displacement capability:
 Xdamage ± 40 mm
- Optimized for 2 or 3 way PA systems and line arrays for ultimate professional applications



TECHNICAL SPECIFICATIONS

Nominal diameter	250 mm 10 in
Rated impedance	8 Ω
Minimum impedance	6,1 Ω
Power capacity*	500 W _{AES}
Program power	1000 W
Sensitivity	97 dB 1W / 1m @ Z _N
Frequency range	60 - 5.000 Hz
Voice coil diameter	63,5 mm 2,5 in
BI factor	18,3 N/A
Moving mass	0,044 kg
Voice coil length	19,5 mm
Air gap height	9,5 mm
X _{damage} (peak to peak)	40 mm

DIMENSION DRAWINGS



MOUNTING INFORMATION

Overall diameter	261 mm	10,28 in
Bolt circle diameter	243,5 mm	9,59 in
Baffle cutout diameter:		
- Front mount	230 mm	9,06 in
Depth	125 mm	4,90 in
Net weight	5,7 kg	12,5 lb
Shipping weight	6,1 kg	13,45 lb

Notes:

THIELE-SMALL PARAMETERS**

Resonant frequency, f _s	60 Hz
D.C. Voice coil resistance, R _e	5,7 Ω
Mechanical Quality Factor, Q _{ms}	7,5
Electrical Quality Factor, Qes	0,29
Total Quality Factor, Qts	0,28
Equivalent Air Volume to C _{ms} , V _{as}	26 I
Mechanical Compliance, C _{ms}	154 μm / N
Mechanical Resistance, R _{ms}	2,3 kg/s
Efficiency, η ₀	2 %
Effective Surface Area, S _d	0,035 m ²
Maximum Displacement, X _{max} ***	8 mm
Displacement Volume, V _d	280 cm ³
Voice Coil Inductance, L _e @ 1 kHz	1 mH



^{*} The power capaticty is determined according to AES2-1984 (r2003) standard. Program power is defined as the transducer's ability to handle normal music program material.

^{**} T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

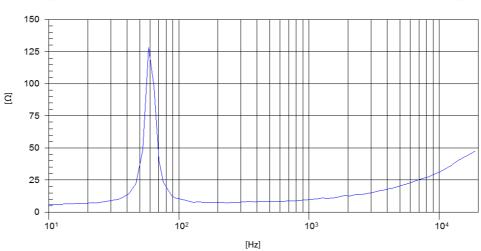
^{***} The X_{max} is calculated as (L_{vc} - H_{ag})/2 + (H_{ag}/3,5), where L_{vc} is the voice coil length and H_{ag} is the air gap



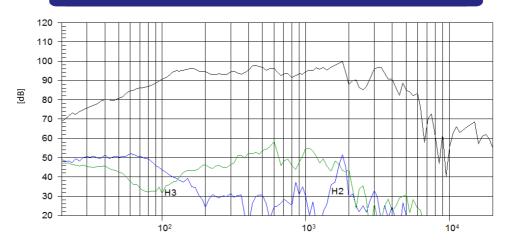
10MC500

LOW & MID FREQUENCY TRANSDUCER

FREE AIR IMPEDANCE CURVE



FREQUENCY RESPONSE AND DISTORTION



[Hz]

Note: On axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m