

12MCS500

LOW & MID FREQUENCY TRANSDUCER

MCS Series

- **KEY FEATURES** maltcross
- High power handling: 1.000 W program power
- 2,5" copper wire voice coil
- Beyma's Malt Cross® Cooling System
- Low power compression looses
- High sensitivity: 97 dB (1W / 1m)
- Optimized pressed steel frame

- FEA optimized magnetic circuit
- Aluminum demodulating ring
- Waterproof cone treatment for both sides of the cone
- Optimized for 2 or 3 way PA systems and line array applications





TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm	12 in
Rated impedance		8 Ω
Minimum impedance		7,3 Ω
Power capacity ¹		500 W _{AES}
Program power ²		1.000 W
Sensitivity	97 dB 1W /	1m @ Z _N
Frequency range	65 -	5.000 Hz
Voice coil diameter	63,5 mm	2,5 in
BI factor		18 N/A
Moving mass		0,064 kg
Voice coil length		19,5 mm
Air gap height		9,5 mm
X _{damage} (peak to peak)		40 mm

THIELE-SMALL PARAMETERS 3

Resonant frequency, f _s	62 Hz
D.C. Voice coil resistance, R _e	5,7 Ω
Mechanical Quality Factor, Q _{ms}	7,8
Electrical Quality Factor, Q _{es}	0,44
Total Quality Factor, Qts	0,42
Equivalent Air Volume to C _{ms} , V _{as}	44 I
Mechanical Compliance, C _{ms}	103 μm / N
Mechanical Resistance, R _{ms}	3,2 kg / s
Efficiency, η ₀	2,3 %
Effective Surface Area, S _d	$0,055 \text{ m}^2$
Maximum Displacement, X _{max} ⁴	8 mm
Displacement Volume, V _d	440 cm ³
Voice Coil Inductance, L _e @ 1 kHz	1,1 mH

Notes:

¹ The power capaticty is determined according to AES2-1984 (r2003) standard.

² Program power is defined as power capacity + 3 dB.

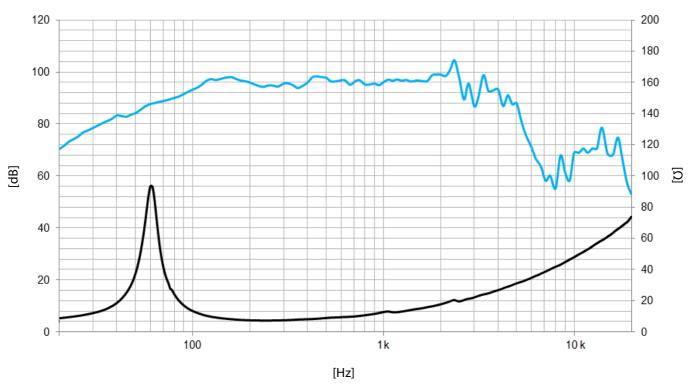
³ T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

⁴ The X_{max} is calculated as (L_{vc} - H_{aq})/2 + (H_{aq}/3,5), where L_{vc} is the voice coil length and H_{aq} is the air gap height



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

MOUNTING INFORMATION

Overall diameter	310 mm	12,2 in
Bolt circle diameter	292 mm	11,5 in
Baffle cutout diameter:		
- Front mount	280 mm	11,0 in
Depth	141 mm	5,5 in
Net weight	6 kg	13,2 lb
Shipping weight	6,7 kg	14,8 lb

DIMENSION DRAWING

