

# 12MC500

**LOW & MID FREQUENCY TRANSDUCER MC Series** 



- High power handling: 1.000 W program power
- 2,5" copper wire voice coil
- Malt Cross<sup>®</sup> Cooling System
- Low power compression losses
- High sensitivity: 98 dB (1W / 1m)
- FEA optimized magnetic circuit
- Aluminum demodulating ring

- Weatherproof cone treatment for both sides of the cone
- Extended controlled displacement: X<sub>max</sub> ± 8 mm
- 40 mm peak-to-peak excursion before damage
- Weight 5,8 kg
- Optimized for 2 or 3 way PA systems and line array for ultimate professional applications





# TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm	12 in
Rated impedance		8 Ω
Minimum impedance		7,3 Ω
Power capacity <sup>1</sup>	į	500 W <sub>AES</sub>
Program power <sup>2</sup>		1.000 W
Sensitivity	98 dB 1W /	1m @ Z <sub>N</sub>
Frequency range	65 -	5.000 Hz
Voice coil diameter	63,5 mm	2,5 in
BI factor		18,3 N/A
Moving mass		0,059 kg
Voice coil length		19,5 mm
Air gap height		9,5 mm
X <sub>damage</sub> (peak to peak)		40 mm

# THIELE-SMALL PARAMETERS 3

Resonant frequency, f <sub>s</sub>	57 Hz
D.C. Voice coil resistance, R <sub>e</sub>	5,6 Ω
Mechanical Quality Factor, Q <sub>ms</sub>	7,8
Electrical Quality Factor, Q <sub>es</sub>	0,35
Total Quality Factor, Qts	0,34
Equivalent Air Volume to C <sub>ms</sub> , V <sub>as</sub>	57 I
Mechanical Compliance, C <sub>ms</sub>	132 μm / N
Mechanical Resistance, R <sub>ms</sub>	2,7 kg/s
Efficiency, η <sub>0</sub>	2,8 %
Effective Surface Area, S <sub>d</sub>	0,055 m <sup>2</sup>
Maximum Displacement, X <sub>max</sub> <sup>4</sup>	8 mm
Displacement Volume, V <sub>d</sub>	440 cm <sup>3</sup>
Voice Coil Inductance, Le	0,7 mH

### Notes

<sup>&</sup>lt;sup>1</sup> The power capaticty is determined according to AES2-1984 (r2003) standard.

<sup>&</sup>lt;sup>2</sup> Program power is defined as power capacity + 3 dB.

<sup>&</sup>lt;sup>3</sup> 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).

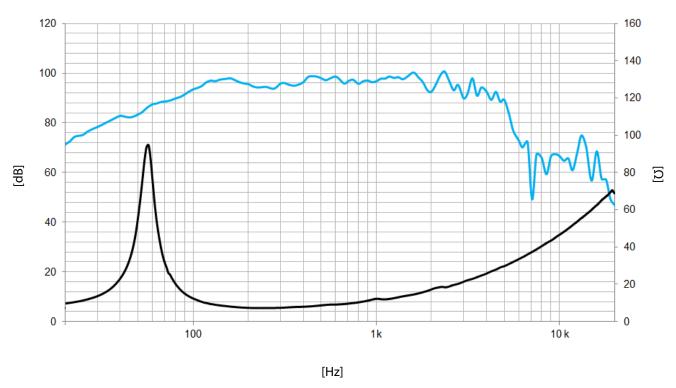
<sup>&</sup>lt;sup>4</sup> The X<sub>max</sub> is calculated as (L<sub>vc</sub> - H<sub>aq</sub>)/2 + (H<sub>aq</sub>/3,5), where L<sub>vc</sub> is the voice coil length and H<sub>aq</sub> is the air gap height.



# 12MC500

LOW & MID FREQUENCY TRANSDUCER

MC Series



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

# **MOUNTING INFORMATION**

Overall diameter	312 mm	12,3 in
Bolt circle diameter	294,5 mm	11,6 in
Baffle cutout diameter:		
- Front mount	278 mm	10,9 in
Depth	140 mm	5,5 in
Net weight	5,8 kg	12,8 lb
Shipping weight	6,5 kg	14,3 lb

# **DIMENSION DRAWING**

