beyma

PROFESSIONAL LOUDSPEAKERS

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12LEX1000Fe

LOW FREQUENCY TRANSDUCER

LEX Series

KEY FEATURES

maltcross TECHNOLOGY

- High power handling and low distortion 12” subwoofer
- Exclusive Malt Cross® Technology Cooling System
- Low power compression losses
- High sensitivity: 95 dB (1W / 1m)
- FEA optimized ferrite magnetic circuit
- Ultra low air noise
- Optimized linear behaviour
- Weatherproof cone with treatment for both sides
- 3,5” DUO in/out copper voice coil
- Extended controlled displacement: X_{max} ± 11 mm
- 51 mm peak-to-peak excursion before damage
- Optimized for direct radiation and band-pass subwoofer applications





TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm	12 in
Rated impedance		8 Ω
Minimum impedance		7,6 Ω
Power capacity [1]		1.000 W_{AES}
Program power [2]		2.000 W
Sensitivity	95 dB	1W / 1m @ Z_N
Frequency range		50 - 1.500 Hz
Recom. enclosure		V_b = 50 l
(Bass-reflex design)		F_b = 49 Hz
Voice coil diameter	88,9 mm	3,5 in
Bl factor		24,6 N/A
Moving mass		0,118 kg
Voice coil length		27 mm
Air gap height		12 mm
X_{damage} (peak to peak)		51 mm

THIELE-SMALL PARAMETERS [3]

Resonant frequency, f_s	49 Hz
D.C. Voice coil resistance, R_e	5,4 Ω
Mechanical Quality Factor, Q_{ms}	3,6
Electrical Quality Factor, Q_{es}	0,32
Total Quality Factor, Q_{ts}	0,30
Equivalent Air Volume to C_{ms}, V_{as}	38,4 l
Mechanical Compliance, C_{ms}	89 µm / N
Mechanical Resistance, R_{ms}	10,1 kg / s
Efficiency, η_0	1,3 %
Effective Surface Area, S_d	0,055 m^2
Maximum Displacement, X_{max} [4]	11 mm
Displacement Volume, V_d	605 cm^3
Voice Coil Inductance, L_e	1,7 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 $(L_{vc} - H_{ag})/2 + (H_{ag}/3,5)$, where L_{vc} is the voice coil length and H_{ag} is the air gap height.

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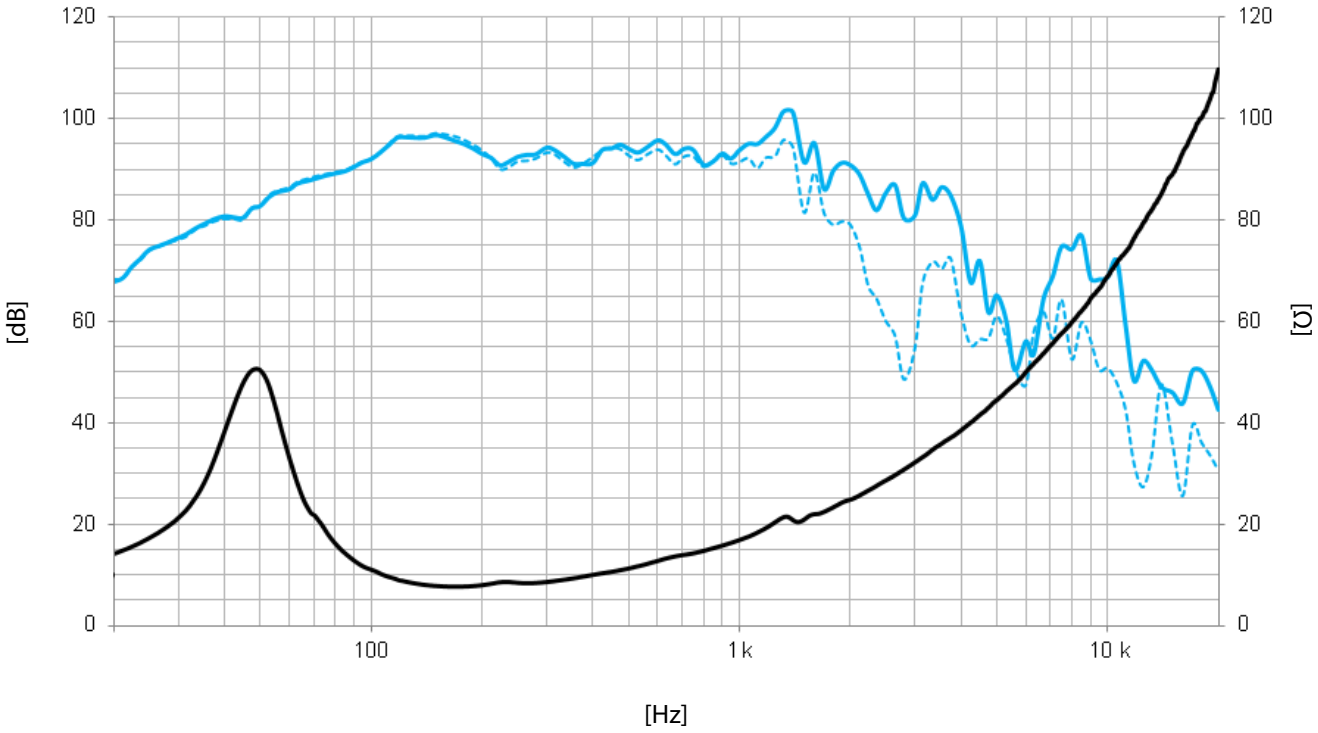
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Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

Frequency response on axis
Frequency response 45º off axis

MOUNTING INFORMATION

Overall diameter	315 mm	12,4 in
Bolt circle diameter	297,5 mm	11,7 in
Baffle cutout diameter:		
- Front mount	282 mm	11,1 in
Depth	166 mm	6,5 in
Volume displaced by driver	3,5 l	0,12 ft³
Net weight	10,4 kg	22,9 lb
Shipping weight	11,1 kg	24,4 lb

DIMENSION DRAWING

