beyma

PROFESSIONAL LOUDSPEAKERS

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18LEX1000Fe

LOW FREQUENCY TRANSDUCER

LEX Series

KEY FEATURES

maltcross TECHNOLOGY

- High power handling and low distortion 18” subwoofer
- Exclusive Malt Cross® Technology Cooling System
- Low power compression losses
- High sensitivity: 98 dB (1W / 1m)
- FEA optimized ceramic 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	460 mm	18 in
Rated impedance		8 Ω
Minimum impedance		7,2 Ω
Power capacity [1]		1.000 W_{AES}
Program power [2]		2.000 W
Sensitivity	98 dB	1W / 1m @ Z_N
Frequency range		35 - 1.000 Hz
Recom. enclosure		V_b = 174 l
(Bass-reflex design)		F_b = 37 Hz
Voice coil diameter	88,9 mm	3,5 in
Bl factor		23,8 N/A
Moving mass		0,196 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	34 Hz
D.C. Voice coil resistance, R_e	5,4 Ω
Mechanical Quality Factor, Q_{ms}	7,3
Electrical Quality Factor, Q_{es}	0,39
Total Quality Factor, Q_{ts}	0,38
Equivalent Air Volume to C_{ms}, V_{as}	250 l
Mechanical Compliance, C_{ms}	111 µm / N
Mechanical Resistance, R_{ms}	5,7 kg / s
Efficiency, η_0	2,4 %
Effective Surface Area, S_d	0,1255 m^2
Maximum Displacement, X_{max} [4]	11 mm
Displacement Volume, V_d	1380 cm^3
Voice Coil Inductance, L_e	1,9 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.

Acústica Beyma SL - P.I. Moncada II, C/ Pont Sec, 1C - 46113 Moncada, Valencia (Spain) - Tel. +34 96 130 13 75 - beyma@beyma.com

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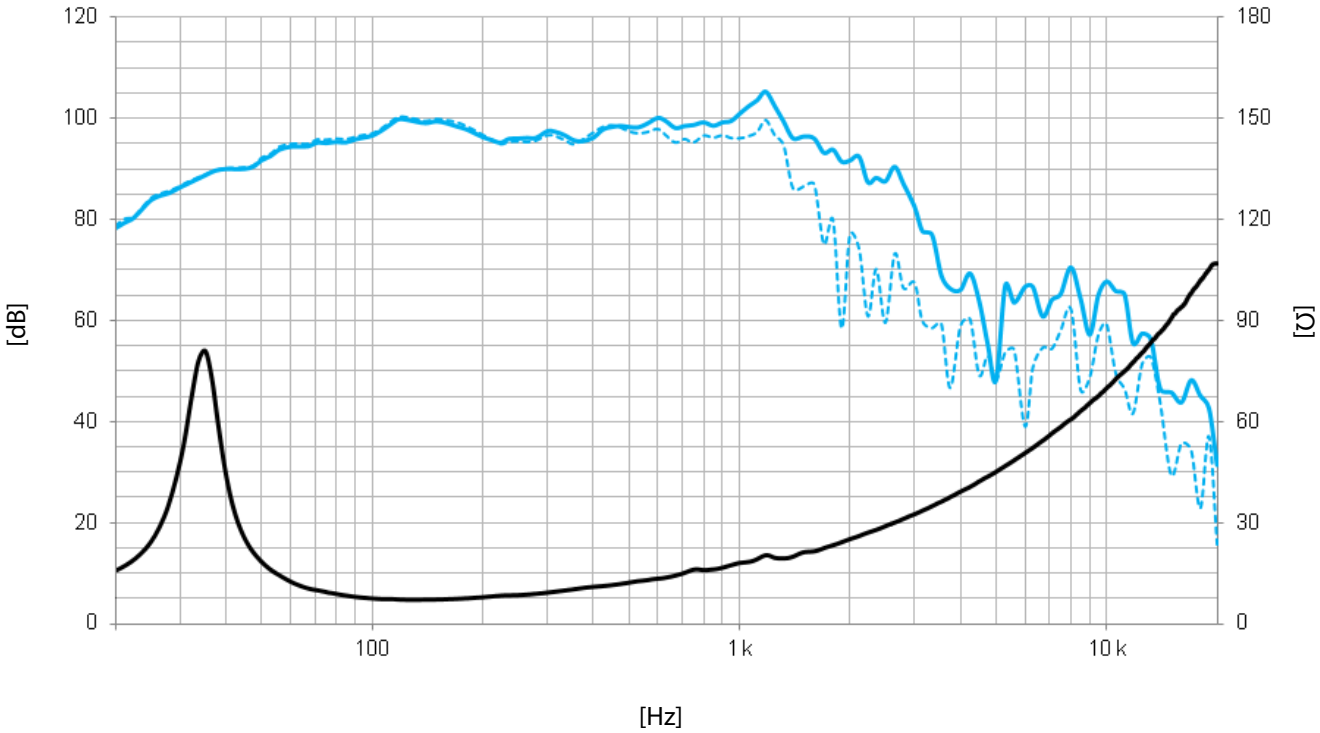
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Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

Frequency response on axis
Frequency response 45º off axis

MOUNTING INFORMATION

Overall diameter	462 mm	18,2 in
Bolt circle diameter	440 mm	17,3 in
Baffle cutout diameter:		
- Front mount	415 mm	16,3 in
Depth	224 mm	8,8 in
Volume displaced by driver	7,5 l	0,26 ft³
Net weight	11,75 kg	25,9 lb
Shipping weight	13,0 kg	28,6 lb

DIMENSION DRAWING

