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PROFESSIONAL LOUDSPEAKERS
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18LEX1000Nd

LOW FREQUENCY TRANSDUCER

Preliminary Data Sheet

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 neodymium magnetic circuit
- Ultra low air noise
- Optimized non-linear behaviour
- Waterproof cone with treatment for both sides
- 3,5” DUO double layer in/out copper voice coil
- Extended controlled displacement: X_{max} ± 10 mm
- 65 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		6,5 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 = 200 l
(Bass-reflex design)		F_b = 39 Hz
Voice coil diameter	88,9 mm	3,5 in
Bl factor		22 N/A
Moving mass		0,185 kg
Voice coil length		25 mm
Air gap height		12 mm
X_{damage} (peak to peak)		65 mm

THIELE-SMALL PARAMETERS [3]

Resonant frequency, f_s	34 Hz
D.C. Voice coil resistance, R_e	5,1 Ω
Mechanical Quality Factor, Q_{ms}	5,6
Electrical Quality Factor, Q_{es}	0,42
Total Quality Factor, Q_{ts}	0,39
Equivalent Air Volume to C_{ms}, V_{as}	260 l
Mechanical Compliance, C_{ms}	117 µm / N
Mechanical Resistance, R_{ms}	7,1 kg / s
Efficiency, η_0	2,4 %
Effective Surface Area, S_d	0,1255 m^2
Maximum Displacement, X_{max} [4]	10 mm
Displacement Volume, V_d	1255 cm^3
Voice Coil Inductance, L_e	1,6 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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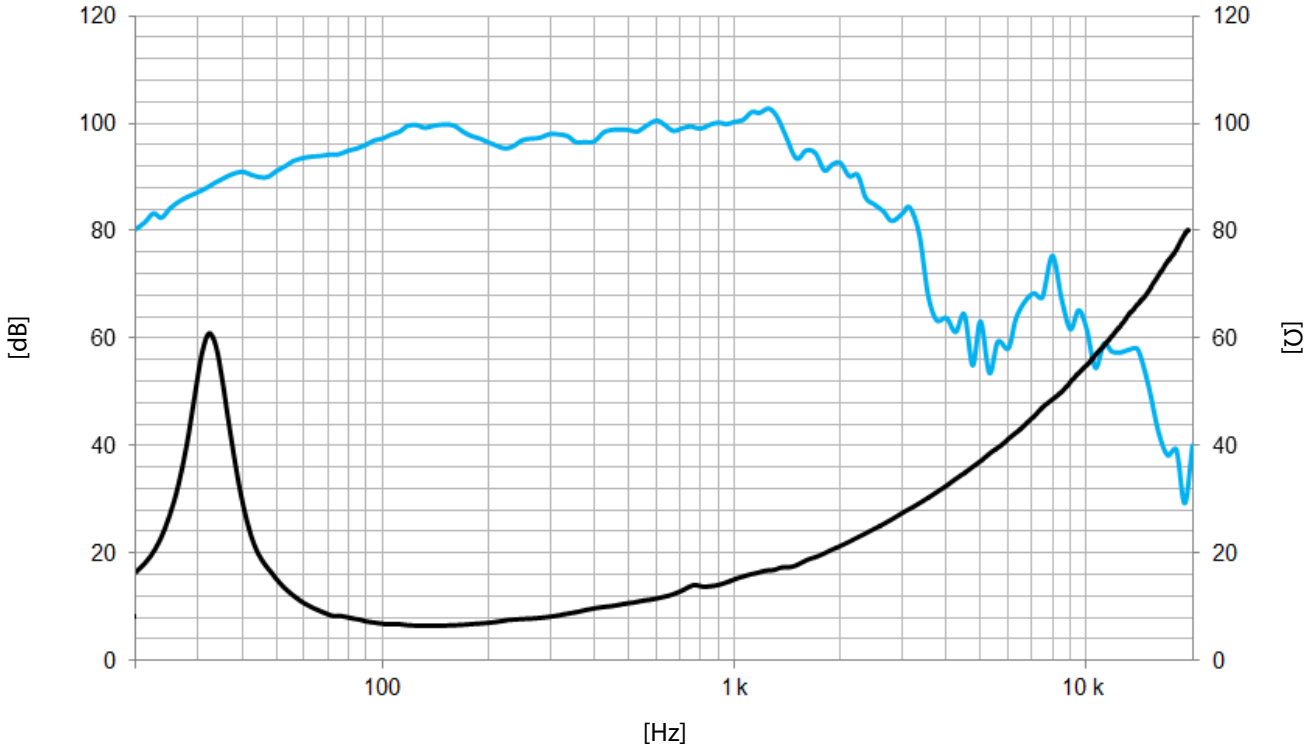

Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

MOUNTING INFORMATION

Overall diameter	462 mm	18,2 in
Bolt circle diameter	441 mm	17,4 in
Baffle cutout diameter:		
- Front mount	426 mm	16,8 in
Depth	233 mm	9,2 in
Volume displaced by driver	7,0 l	0,25 ft³
Net weight	7,3 kg	16,1 lb
Shipping weight	8,6 kg	19,0 lb

DIMENSION DRAWING