

18LEX1000Nd

LOW FREQUENCY TRANSDUCER Preliminary Data Sheet



- 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	1.0	1.000 W _{AES}	
Program power ²		2.000 W	
Sensitivity	98 dB 1W / 1	zm @ Z _N	
Frequency range	35 -	1.000 Hz	
Recom. enclosure	\	/ _b = 200	
(Bass-reflex design)	F	= 39 Hz	
Voice coil diameter	88,9 mm	3,5 in	
BI 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, Qes	0,42
Total Quality Factor, Qts	0,39
Equivalent Air Volume to C _{ms} , V _{as}	260 I
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, Le	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.

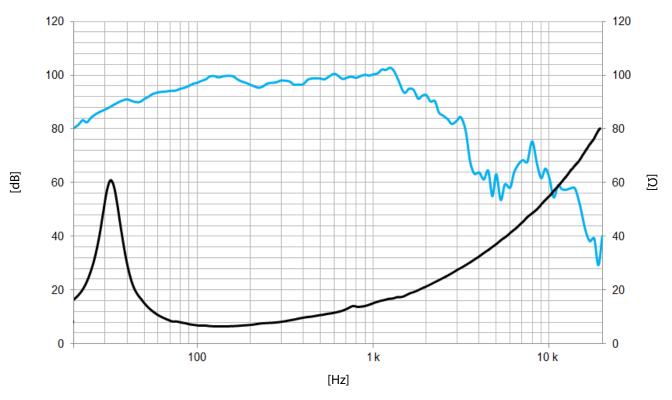
³ T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

 $^{^4}$ The X_{max} is calculated as (L_{vc} - H_{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: 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 I	0,25 ft ³
Net weight	7,3 kg	16,1 lb
Shipping weight	8,6 kg	19,0 lb

DIMENSION DRAWING

