

18LEX1600Nd

LOW FREQUENCY TRANSDUCER

LEX Series

KEY FEATURES — maltcross

- High power handling and low distortion 18" subwoofer
- Exclusive Malt Cross[®] Technology Cooling System
- Low power compression losses
- High sensitivity: 96 dB (1W / 1m)
- FEA optimized neodymium magnetic circuit
- Aluminium demodulating ring
- Ultra low air noise
- Optimized linear behaviour



TECHNICAL SPECIFICATIONS

Nominal diameter	460 mm	18 in
Rated impedance		8 Ω
Minimum impedance		7 Ω
Power capacity ¹	1.600 W _{AES}	
Program power ²	3	.200 W
Sensitivity	96 dB 1W / 1n	n @ Z _N
Frequency range	35 - 1.000 Hz	
Recom. enclosure	V _b = 180 I	
(Bass-reflex design)	F _b =	= 37 Hz
Voice coil diameter	101,6 mm	4 in
BI factor	24	4,5 N/A
Moving mass	0,	229 kg
Voice coil length		35 mm
Air gap height		14 mm
X _{damage} (peak to peak)		65 mm

- Exclusive NCR membrane (Neck Coupling Reinforcement)
- Waterproof cone with treatment for both sides •
- Double silicone spider
- 4" DUO double layer in/out copper voice coil
- Extended controlled displacement: X_{max} ± 14,5 mm
- 65 mm peak-to-peak excursion before damage
- Optimized for direct radiation and band-pass subwoofer applications



THIELE-SMALL PARAMETERS³

Resonant frequency, f _s	33 Hz
D.C. Voice coil resistance, R _e	5,8 Ω
Mechanical Quality Factor, Q _{ms}	11,4
Electrical Quality Factor, Q _{es}	0,45
Total Quality Factor, Q _{ts}	0,43
Equivalent Air Volume to C _{ms} , V _{as}	231
Mechanical Compliance, C _{ms}	104 µm / N
Mechanical Resistance, R _{ms}	4,1 kg / s
Efficiency, η ₀	1,7 %
Effective Surface Area, S _d	0,1255 m ²
Maximum Displacement, X _{max} ⁴	14,5 mm
Displacement Volume, V _d	1820 cm ³
Voice Coil Inductance, L _e @ 1 kHz	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.

^a 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).

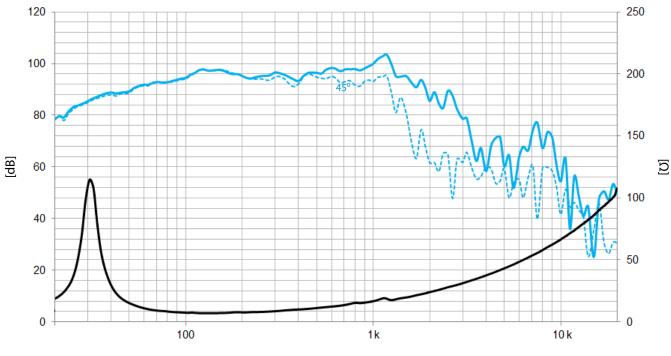
⁴ The X_{max} is calculated as (L_{vc} - H_{aq})/2 + (H_{aq}/3,5), where L_{vc} is the voice coil length and H_{ag} is the air gap height.



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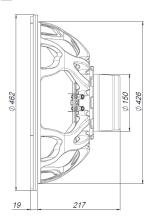
[Hz]

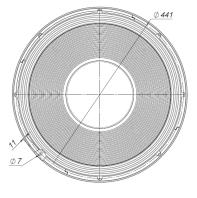
Note: On axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

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	236 mm	9,3 in
Net weight	9,5 kg	20,9 lb
Shipping weight	10,8 kg	23,8 lb

MOUNTING INFORMATION

DIMENSION DRAWING





06/17