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PROFESSIONAL LOUDSPEAKERS
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# 18LEX1600Nd

## 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: 96 dB (1W / 1m)
- FEA optimized neodymium magnetic circuit
- Aluminium demodulating ring
- Ultra low air noise
- Optimized linear behaviour
- Exclusive NCR membrane (Neck Coupling Reinforcement)
- Weatherproof 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





## 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 / 1m @ $Z_N$ |
| **Frequency range** | | 35 - 1.000 Hz |
| **Recom. enclosure** | | $V_b$ = 180 l |
| **(Bass-reflex design)** | | $F_b$ = 37 Hz |
| **Voice coil diameter** | 101,6 mm | 4 in |
| **Bl factor** | | 24,5 N/A |
| **Moving mass** | | 0,229 kg |
| **Voice coil length** | | 35 mm |
| **Air gap height** | | 14 mm |
| **$X_{damage}$ (peak to peak)** | | 65 mm |

## THIELE-SMALL PARAMETERS [3]

| | |
|---|---|
| **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 l |
| **Mechanical Compliance, $C_{ms}$** | 104 µm / N |
| **Mechanical Resistance, $R_{ms}$** | 4,1 kg / s |
| **Efficiency, $\eta_0$** | 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.

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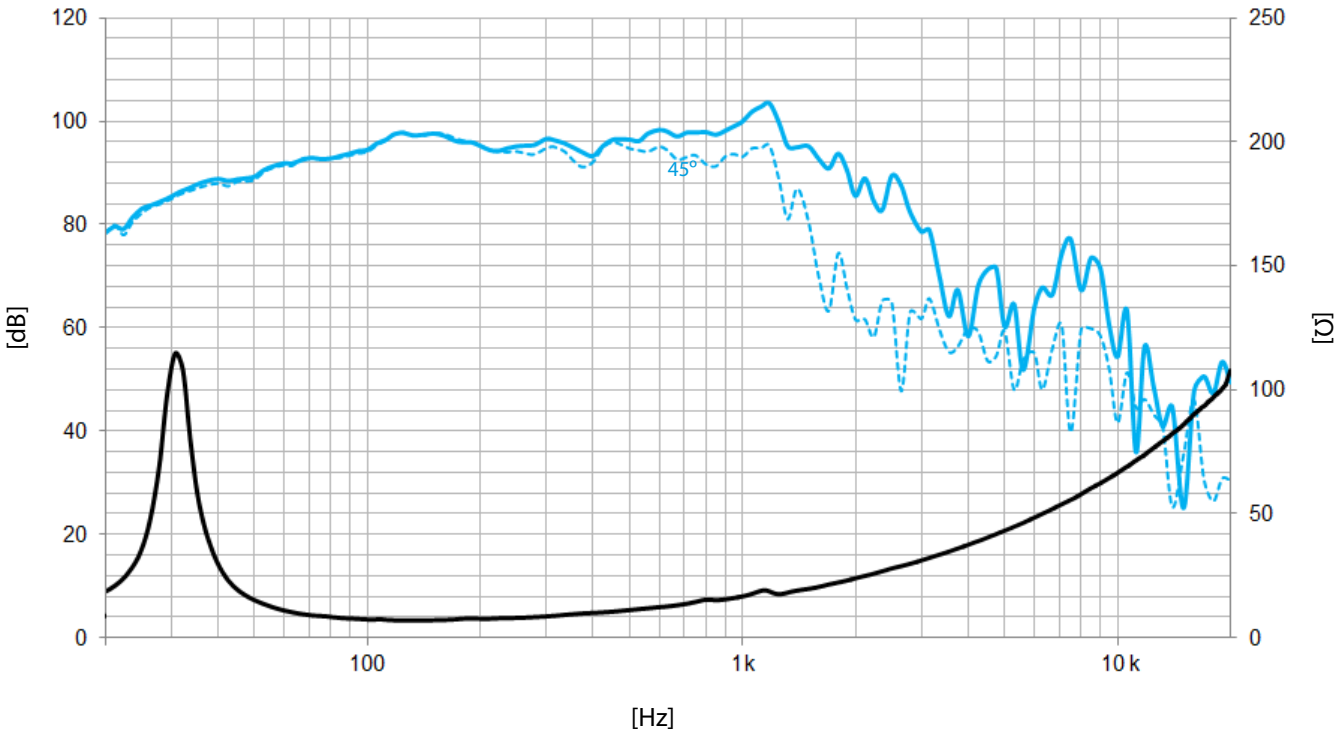
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**Note:** On axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

## MOUNTING INFORMATION

| | | |
|---|---|---|
| **Overall diameter** | 462 mm | 18,2 in |
| **Bolt circle diameter** | 440 mm | 17,3 in |
| **Baffle cutout diameter:** | | |
| **- Front mount** | 415 mm | 16,3 in |
| **Depth** | 234 mm | 9,2 in |
| **Net weight** | 9,9 kg | 21,8 lb |
| **Shipping weight** | 10,1 kg | 22,2 lb |

## DIMENSION DRAWING

