

18LEX1600Fe

LEX Series

LOW FREQUENCY TRANSDUCER



- High power handling and low distortion 18" subwoofer
- Exclusive Malt Cross® Technology Cooling System
- Low power compression losses
- High sensitivity: 97 dB (1W / 1m)
- · FEA optimized ceramic 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 in/out copper voice coil
- Extended controlled displacement: X_{max} ± 13 mm
- 60 mm peak-to-peak excursion before damage
- Optimized for direct radiation and band-pass subwoofer applications





TECHNICAL SPECIFICATIONS

Minimum impedance $6,1 \Omega$ Power capacity 1 1.600 W_{AES} Program power 2 3.200 W Sensitivity 97 dB 1W / 1m @ Z_N Frequency range $35 - 1.000 \text{ Hz}$ Recom. enclosure $V_b = 174 \text{ Hz}$ (Bass-reflex design) $F_b = 37 \text{ Hz}$ Voice coil diameter $101,6 \text{ mm}$ 4 inBI factor $26,9 \text{ N/A}$ Moving mass $0,252 \text{ kg}$ Voice coil length 32 mm Air gap height 15 mm	Nominal diameter	460 mm	18 in	
Power capacity 1 1.600 W_{AES} Program power 2 3.200 W Sensitivity 97 dB $1 \text{W} / 1 \text{m}$ @ Z_N Frequency range $35 - 1.000 \text{ Hz}$ Recom. enclosure $V_b = 174 \text{ Hz}$ (Bass-reflex design) $F_b = 37 \text{ Hz}$ Voice coil diameter $101,6 \text{ mm}$ 4 in BI factor $26,9 \text{ N/A}$ Moving mass $0,252 \text{ kg}$ Voice coil length 32 mm Air gap height 15 mm	Rated impedance		8 Ω	
Program power 2 3.200 W Sensitivity 97 dB 1W / $1\text{m} \otimes Z_N$ Frequency range $35 - 1.000 \text{ Hz}$ Recom. enclosure $V_b = 174 \text{ Hz}$ (Bass-reflex design) $F_b = 37 \text{ Hz}$ Voice coil diameter $101,6 \text{ mm}$ 4 inBI factor $26,9 \text{ N/A}$ Moving mass $0,252 \text{ kg}$ Voice coil length 32 mm Air gap height 15 mm	Minimum impedance		6,1 Ω	
Sensitivity97 dB $1W / 1m @ Z_N$ Frequency range $35 - 1.000 Hz$ Recom. enclosure $V_b = 174 Hz$ (Bass-reflex design) $F_b = 37 Hz$ Voice coil diameter $101,6 mm$ 4 inBI factor $26,9 N/A$ Moving mass $0,252 kg$ Voice coil length $32 mm$ Air gap height $15 mm$	Power capacity ¹	1.6	1.600 W _{AES}	
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Moving mass0,252 kgVoice coil length32 mmAir gap height15 mm	Voice coil diameter	101,6 mm	4 in	
Voice coil length32 mmAir gap height15 mm	BI factor		26,9 N/A	
Air gap height 15 mm	Moving mass		0,252 kg	
	Voice coil length		32 mm	
X _{damage} (peak to peak) 60 mm	Air gap height		15 mm	
	X _{damage} (peak to peak)		60 mm	

THIELE-SMALL PARAMETERS3

Decement for many f	2411-
Resonant frequency, f _s	34 Hz
D.C. Voice coil resistance, R _e	5,3 Ω
Mechanical Quality Factor, Q _{ms}	7,4
Electrical Quality Factor, Qes	0,40
Total Quality Factor, Qts	0,38
Equivalent Air Volume to C _{ms} , V _{as}	188 I
Mechanical Compliance, C _{ms}	85 μm / N
Mechanical Resistance, R _{ms}	7,4 kg / s
Efficiency, η ₀	1,9 %
Effective Surface Area, S _d	0,1255 m ²
Maximum Displacement, X _{max} ⁴	13 mm
Displacement Volume, V _d	1631 cm ³
Voice Coil Inductance, Le	1,7 mH

Notes

¹ The power capaticty is determined according to AES2-1984 (r2003) standard

² Program power is defined as power capacity + 3 dB.

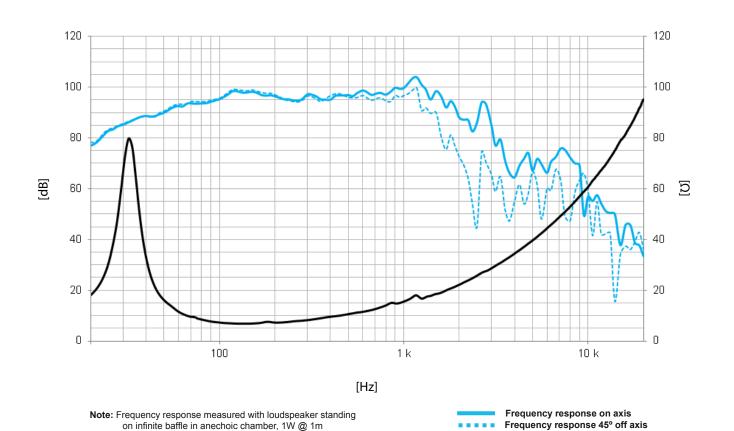
³ T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

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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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	8,01	0,28 ft ³
Net weight	14,6 kg	32,1 lb
Shipping weight	15,9 kg	35,0 lb

DIMENSION DRAWING

