

12LEX1000Fe

LOW FREQUENCY TRANSDUCER

Preliminary Data Sheet

KEY FEATURES — maltcross

- High power handling and low distortion 12" subwoofer
- Exclusive Malt Cross[®] Technology Cooling System
- Low power compression losses
- High sensitivity: 95 dB (1W / 1m)
- FEA optimized neodymium magnetic circuit
- Ultra low air noise
- Optimized linear behaviour



TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm	12 in
Rated impedance		8 Ω
Minimum impedance		7,6 Ω
Power capacity ¹	1.(000 W _{AES}
Program power ²		2.000 W
Sensitivity	95 dB 1W /	1m @ Z _N
Frequency range	50 -	1.500 Hz
Recom. enclosure		V _b = 50 I
(Bass-reflex design)	F	5 = 49 Hz
Voice coil diameter	88,9 mm	3,5 in
BI factor		24,6 N/A
Moving mass		0,118 kg
Voice coil length		27 mm
Air gap height		12 mm
X _{damage} (peak to peak)		51 mm

- Waterproof cone with treatment for both sides
- 3,5" DUO in/out copper voice coil
- Extended controlled displacement: Xmax ± 11 mm
- 51 mm peak-to-peak excursion before damage
- · Optimized for direct radiation and band-pass subwoofer applications



THIELE-SMALL PARAMETERS³

Resonant frequency, f _s	49 Hz
D.C. Voice coil resistance, R _e	5,4 Ω
Mechanical Quality Factor, Q _{ms}	3,6
Electrical Quality Factor, Q _{es}	0,32
Total Quality Factor, Q _{ts}	0,30
Equivalent Air Volume to C _{ms} , V _{as}	38,4 I
Mechanical Compliance, C _{ms}	89 µm / N
Mechanical Resistance, R _{ms}	10,1 kg / s
Efficiency, η ₀	1,3 %
Effective Surface Area, S _d	0,055 m²
Maximum Displacement, X _{max} ⁴	11 mm
Displacement Volume, V _d	605 cm ³
Voice Coil Inductance, L _e	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).

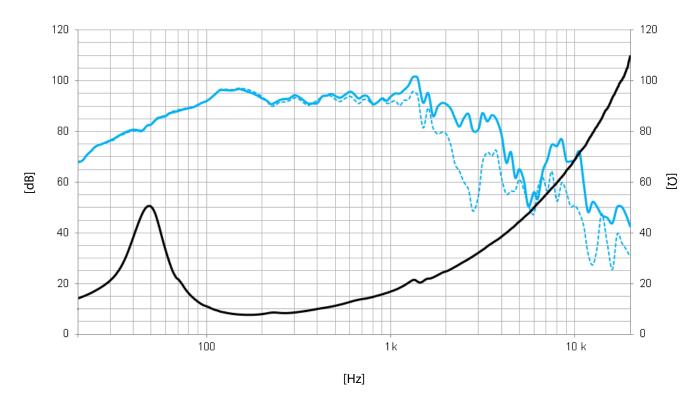
⁴ The X_{max} is calculated as (L_{vc} - H_{ag})/2 + (H_{ag}/3,5), where L_{vc} is the voice coil length and H_{ag} is the air gap height.



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

Frequency response on axis Frequency response 45° off axis

MOUNTING INFORMATION

Overall diameter	315 mm	12,4 in
Bolt circle diameter	297,5 mm	11,7 in
Baffle cutout diameter:		
- Front mount	282 mm	11,1 in
Depth	166 mm	6,5 in
Volume displaced by driver	3,5 I	0,12 ft ³
Net weight	10,4 kg	22,9 lb
Shipping weight	11,1 kg	24,4 lb

DIMENSION DRAWING

