

KEY FEATURES

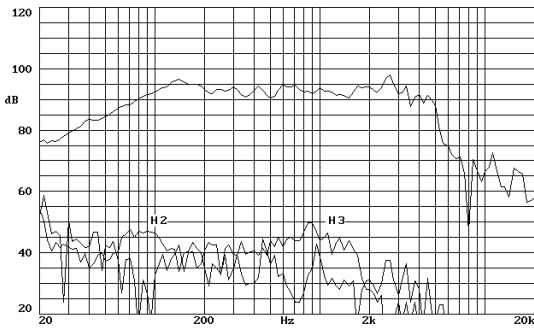
- Ultra light loudspeaker (3.83 kg. 8.43 lb.)
- 3" (77 mm.) voice coil
- High sensitivity: 96 dB
- High performance neodymium magnet system
- Half the weight than a conventional ferrite model
- Large Xmax: 5 mm.
- Extra vented magnetic structure
- Designed for extremely compact woofer applications



GENERAL DESCRIPTION

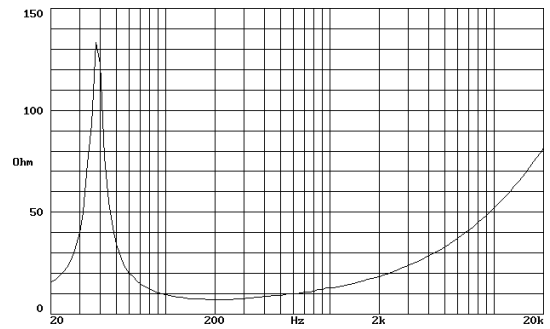
This 12" bass loudspeaker has been designed to achieve a very light loudspeaker with superior technical specifications. Thus, the magnetic system incorporates a high energy neodymium magnet, reducing the total mass of the unit to less than 50% of a conventional ferrite model. Moreover, the heat dissipation has been improved with the use of extra-cooling. The 12LW30/N incorporates a 3" voice coil made with high quality materials: round copper wire with high temperature bonding strength and polyimide former. The 12LW30/N is highly recommended for those woofer applications that require a light and small loudspeaker with excellent technical specifications.

FREQUENCY RESPONSE AND DISTORTION CURVES

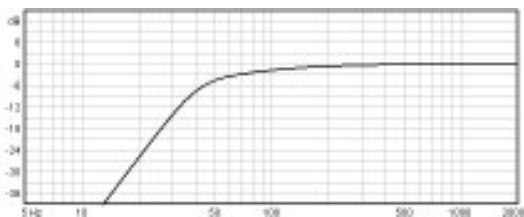


Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

FREE AIR IMPEDANCE CURVE

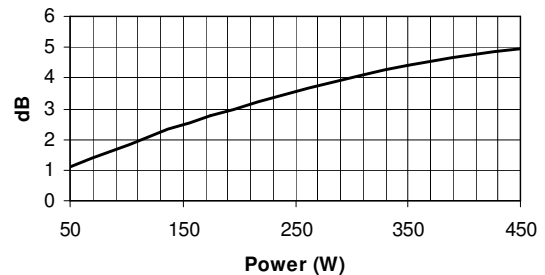


PREDICTED LOW FREQUENCY RESPONSE



Note: Bass-reflex cabinet, Vb=50 l, fb=40 Hz

POWER COMPRESSION LOSSES



Note: These losses are calculated from a five minutes AES power test applying band limited pink noise (25-1200 Hz). The loudspeaker is free-air standing.

TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm. 12 in.
Rated impedance	8 ohms.
Minimum impedance	7.1 ohms.
Power capacity *	450 w AES
Program power	900 w
Sensitivity	96 dB 2.83v @ 1m @ 2π
Frequency range	35 - 5000 Hz
Recom. enclosure vol.	20 / 70 l 0.7 / 2.5 ft. ³
Voice coil diameter	77 mm. 3 in.
Magnetic assembly weight	3.13 kg. 6.88 lb.
BL factor	17.9 N / A
Moving mass	0.066 kg.
Voice coil length	17 mm.
Air gap height	8 mm.
X damage (peak to peak)	30 mm.

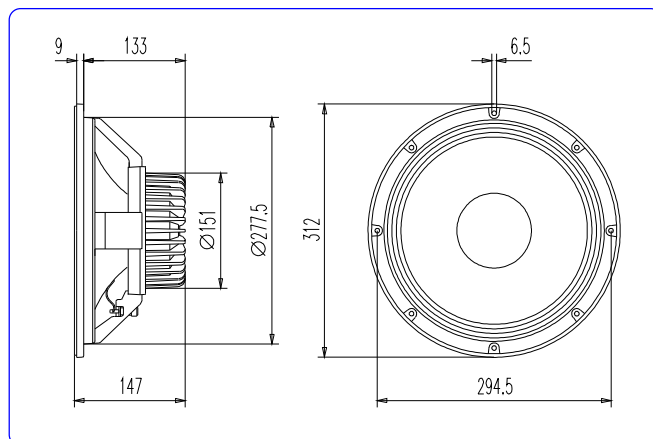
MOUNTING INFORMATION

Overall diameter	312 mm. 12.28 in.
Bolt circle diameter	294.5 mm. 11.59 in.
Baffle cutout diameter:	
- Front mount	277.5 mm. 10.93 in.
- Rear mount	280 mm. 11.02 in.
Depth	147 mm. 5.79 in.
Volume displaced by driver	4 l 0.11 ft. ³
Net weight	3.83 kg. 8.43 lb.
Shipping weight	4.53 kg. 9.97 lb.

THIELE-SMALL PARAMETERS **

Resonant frequency, fs	38 Hz
D.C. Voice coil resistance, Re	6.1 ohms.
Mechanical Quality Factor, Qms	6.6
Electrical Quality Factor, Qes	0.3
Total Quality Factor, Qts	0.29
Equivalent Air Volume to Cms, Vas	109 l
Mechanical Compliance, Cms	267 μm / N
Mechanical Resistance, Rms	2.4 kg / s
Efficiency, ηo (%)	2
Effective Surface Area, Sd (m ²)	0.0540 m ²
Maximum Displacement, Xmax	5 mm.
Displacement Volume, Vd	268 cm ³
Voice Coil Inductance, Le @ 1 kHz	1.4 mH

DIMENSION DRAWINGS



MATERIALS

- **Voice coil:** round copper wire with high temperature bonding strength. Polyimide former able to withstand high temperatures.
- **Cone:** high stiffness paper cone.
- **Surround:** treated cloth to assure good retaining of elasticity in despite of continuing use.
- **Spider:** cotton spider.
- **Metal parts:** anti-corrosion coated to resist aggressive environmental conditions.
- **Basket:** specially designed die cast aluminium basket to avoid disturbing resonances.
- **Magnet:** high energy neodymium magnet.

Notes:

*The power capacity is determined according to AES2-1984 (r2003) standard. Program power is defined as the transducer's ability to handle normal music program material.

**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).



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