

KEY FEATURES

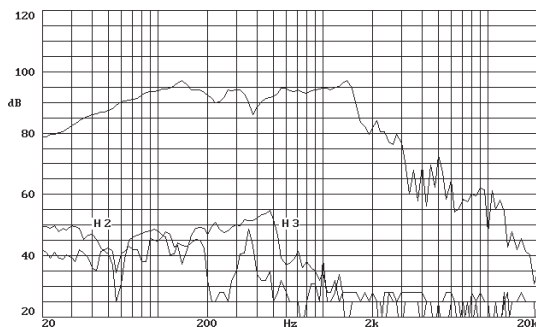
- Superior power handling (1000 W_{AES})
- Special cone designed to withstand severe outdoor conditions
- 4.5" edgewound copper voice coil with polyimide fiber glass former
- Large Xmax allowing longer voice coil displacements
- Dual spider configuration of improved temperature behaviour: retain good mechanical properties at high power
- Additional heat dissipation due to the use of a metal intercooler
- Designed for subwoofer applications that require extra power handling



GENERAL DESCRIPTION

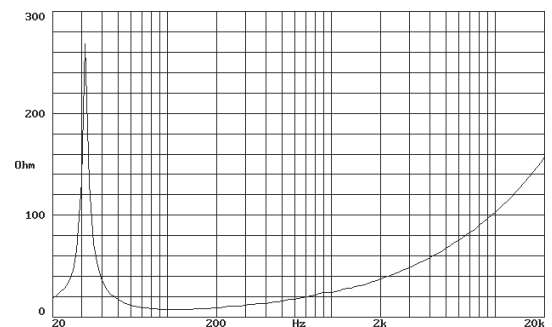
This low frequency transducer is specially designed to withstand real high power (1000 W_{AES}). Beginning with the 4.5" voice coil, it is the result of the combination of the use of high quality materials (high temperature magnet wire and polyimide fiber glass former) and the important improvements we have achieved in the manufacturing process. Moreover, the use of a thick air gap height and a considerable voice coil length assures a good heat dissipation and an unusual X damage (45 mm). Besides, the cone is made of a high strength paper covered with an special treatment that endures the most extremely outdoor conditions. Another typical problem, the lack of retaining spider mechanical properties, has been solved with the use of a dual spider configuration that includes a nomex spider. Furthermore, the application range of this stout loudspeaker spreads from compact bass-reflex cabinets to high-SPL horn-loaded systems.

FREQUENCY RESPONSE AND DISTORTION CURVES

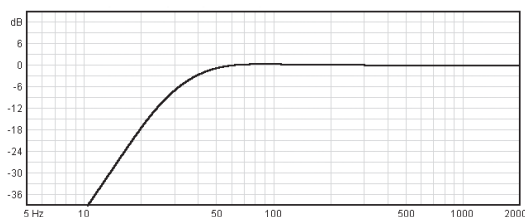


Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

FREE AIR IMPEDANCE CURVE

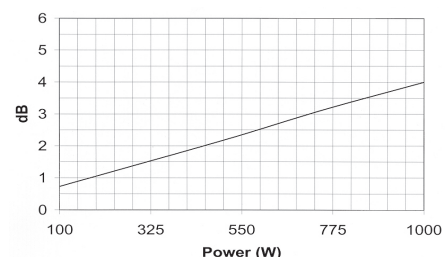


PREDICTED LOW FREQUENCY RESPONSE



Note: Bass-reflex cabinet, Vb=160 l, fb=33 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	460 mm.	18 in.
Rated impedance	8 ohms.	
Minimum impedance	7.4 ohms.	
Power capacity*	1000 w AES	
Program power	2000 w	
Sensitivity	97 dB	2.83v @ 1m @ 2 π
Frequency range	25 - 1000 Hz	
Recom. enclosure vol.	80 / 200 l	2.8 / 7 ft. ³
Voice coil diameter	114 mm.	4.5 in.
Magnetic assembly weight	10.8 kg.	23.8 lb.
BL factor	26 N / A	
Moving mass	0.206 kg.	
Voice coil length	30 mm.	
Air gap height	14 mm.	
X damage (peak to peak)	45 mm.	

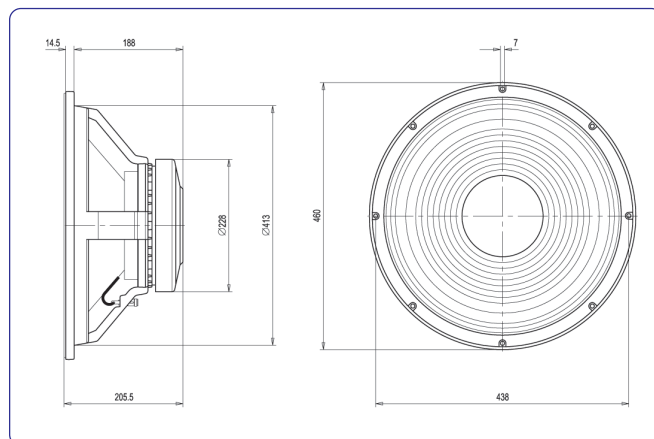
MOUNTING INFORMATION

Overall diameter	460 mm.	18.11 in.
Bolt circle diameter	438 mm.	17.24 in.
Baffle cutout diameter:		
- Front mount	415 mm.	16.34 in.
- Rear mount	400 mm.	15.75 in.
Depth	205.5 mm.	8.09 in.
Volume displaced by driver	13 l	0.46 ft. ³
Net weight	13.2 kg.	29 lb.
Shipping weight	14.7 kg.	32.3 lb.

THIELE-SMALL PARAMETERS**

Resonant frequency, fs	32 Hz
D.C. Voice coil resistance, Re	6.2 ohms.
Mechanical Quality Factor, Qms	16.7
Electrical Quality Factor, Qes	0.37
Total Quality Factor, Qts	0.36
Equivalent Air Volume to Cms, Vas	245 l
Mechanical Compliance, Cms	122 μ m / N
Mechanical Resistance, Rms	2.5 kg / s
Efficiency, η_0 (%)	2
Effective Surface Area, Sd (m ²)	0.1200 m ²
Maximum Displacement, Xmax	8 mm.
Displacement Volume, Vd	960 cm ³
Voice Coil Inductance, Le @ 1 kHz	6 mH

DIMENSION DRAWINGS



MATERIALS

- **Voice coil:** edgewound copper wire with high temperature bonding strength. Polyimide fiber glass former able to withstand high temperatures.
- **Cone:** specially treated paper to endure even the high forces produced in a bass horn application and extreme climatic conditions.
- **Surround:** treated cloth to assure good retaining of elasticity in despite of continuing use.
- **Spider:** dual spider combination made of nomex + polycotton to maintain good mechanical properties at high applied power.
- **Metal parts:** anti-corrosion coated back plate designed to resist aggressive environmental conditions
- **Basket:** specially designed die cast aluminium basket to avoid disturbing resonances.
- **Magnet:** high Curie temperature ferrite.

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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