

KEY FEATURES

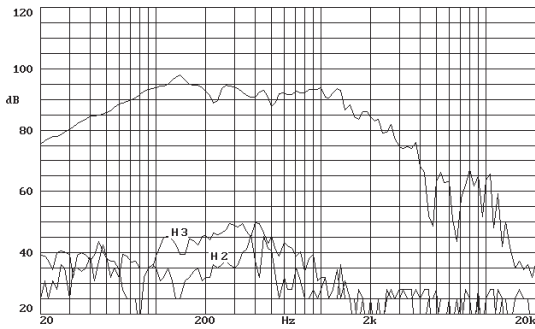
- Superior power handling (1000 W_{AES})
- Special cone designed to withstand severe outdoor conditions
- 4.5" edgewound copper voice coil with polyimide fiber glass former
- Large X_{max} allowing longer voice coil displacements
- Dual spider configuration of improved temperature behaviour: retain good 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

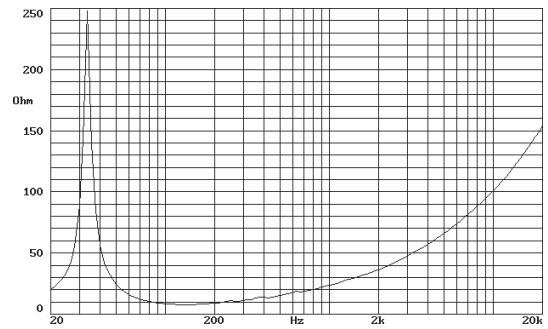
This low frequency transducer is specially designed to withstand real high power (1000 W_{AES}). Beginning with the 4.5" voice coil, it is the result of the combination of the use of high quality materials (high temperature magnet wire and polyimide fiber glass former) and the important improvements 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 a 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

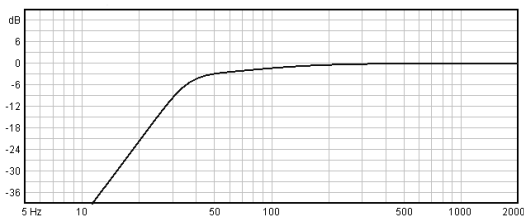


Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

FREE AIR IMPEDANCE CURVE

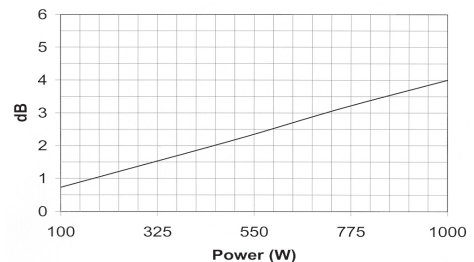


PREDICTED LOW FREQUENCY RESPONSE



Note: Bass-reflex cabinet, V_b=100 l, f_b=35 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 | 380 mm. | 15 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 @ 2π |
| Frequency range | 25 - 1200 Hz | |
| Recom. enclosure vol. | 40 / 150 l | 1.4 / 5.3 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 | 0.156 kg. | |
| Voice coil length | 30 mm. | |
| Air gap height | 14 mm. | |
| X damage (peak to peak) | 45 mm. | |

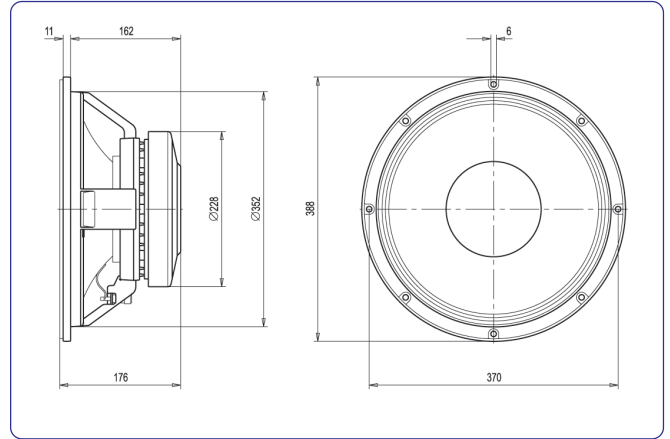
MOUNTING INFORMATION

| | | |
|----------------------------|----------|-----------------------|
| Overall diameter | 388 mm. | 15.28 in. |
| Bolt circle diameter | 370 mm. | 14.57 in. |
| Baffle cutout diameter: | | |
| - Front mount | 352 mm. | 13.86 in. |
| - Rear mount | 355 mm. | 13.98 in. |
| Depth | 176 mm. | 6.93 in. |
| Volume displaced by driver | 7 l | 0.25 ft. ³ |
| Net weight | 12.6 kg. | 27.7 lb. |
| Shipping weight | 13.6 kg. | 29.9 lb. |

THIELE-SMALL PARAMETERS**

| | |
|--|-----------------------|
| Resonant frequency, fs | 35 Hz |
| D.C. Voice coil resistance, Re | 6.2 ohms. |
| Mechanical Quality Factor, Qms | 12.8 |
| Electrical Quality Factor, Qes | 0.30 |
| Total Quality Factor, Qts | 0.29 |
| Equivalent Air Volume to Cms, Vas | 146 l |
| Mechanical Compliance, Cms | 132 μm / N |
| Mechanical Resistance, Rms | 2.9 kg / s |
| Efficiency, ηo (%) | 2 |
| Effective Surface Area, Sd (m ²) | 0.0880 m ² |
| Maximum Displacement, Xmax | 8 mm. |
| Displacement Volume, Vd | 700 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).



acústica beyma, s.a.