

KEY FEATURES

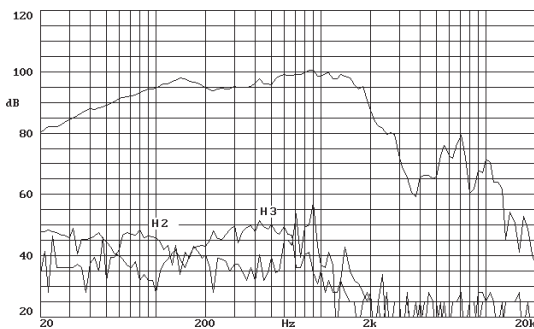
- High power handling (700 W_{AES})
- Waterproof paper cone
- 4" edgewound copper voice coil with polyimide fiber glass former
- Optimum winding length for increased linear excursion
- Spiders of improved temperature behaviour: retain good mechanical properties at high power
- Designed for woofer applications



GENERAL DESCRIPTION

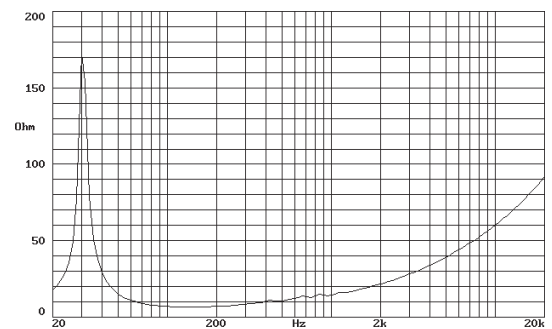
This low frequency transducer is specially intended for the most demanding applications. Its design concept arises from the need of achieve a more resistant loudspeaker that matches the more and more power given by ultimate amplification systems. In order to accomplish that, almost every component of the speaker has been reconsidered: its voice coil has the benefits of an improved manufacturing process and the highest quality materials, while the dual spider configuration includes a nomex spider that maintains its compliance constant with the applied power. Moreover, the magnetic structure construction generates a symmetrical magnetic field and, at the same time, provides an efficient thermal path which contributes to heat dissipation. Furthermore, its parameters have been optimized to obtain an excellent bass response when used in small bass-reflex cabinets.

FREQUENCY RESPONSE AND DISTORTION CURVES

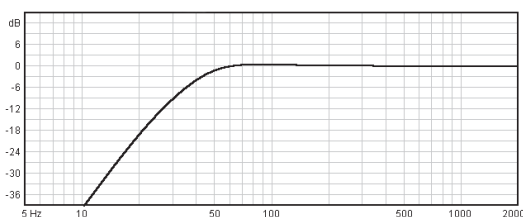


Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

FREE AIR IMPEDANCE CURVE

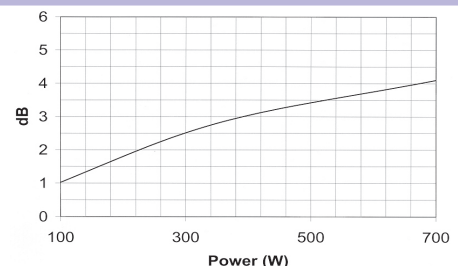


PREDICTED LOW FREQUENCY RESPONSE



Note: Bass-reflex cabinet, V_b=150 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 | 460 mm. | 18 in. |
| Rated impedance | 8 ohms. | |
| Minimum impedance | 7 ohms. | |
| Power capacity* | 700 w AES | |
| Program power | 1400 w | |
| Sensitivity | 97 dB | 2.83v @ 1m @ 2π |
| Frequency range | 25 - 1500 Hz | |
| Recom. enclosure vol. | 80 / 200 l | 2.8 / 7 ft. ³ |
| Voice coil diameter | 100 mm. | 4 in. |
| Magnetic assembly weight | 9 kg. | 19.8 lb. |
| BL factor | 22.5 N / A | |
| Moving mass | 0.171 kg. | |
| Voice coil length | 23 mm. | |
| Air gap height | 9.5 mm. | |
| X damage (peak to peak) | 33 mm. | |

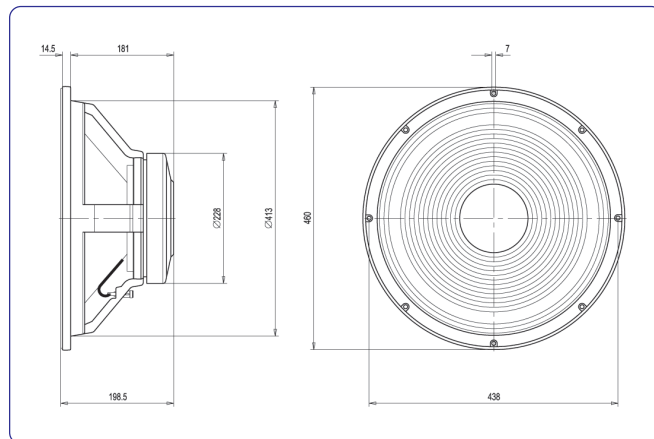
MOUNTING INFORMATION

| | | |
|----------------------------|-----------|-----------------------|
| 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 | 198.5 mm. | 7.82 in. |
| Volume displaced by driver | 13 l | 0.46 ft. ³ |
| Net weight | 11.5 kg. | 25.3 lb. |
| Shipping weight | 13 kg. | 28.6 lb. |

THIELE-SMALL PARAMETERS**

| | |
|--|-----------------------|
| Resonant frequency, fs | 32 Hz |
| D.C. Voice coil resistance, Re | 6 ohms. |
| Mechanical Quality Factor, Qms | 12.7 |
| Electrical Quality Factor, Qes | 0.42 |
| Total Quality Factor, Qts | 0.41 |
| Equivalent Air Volume to Cms, Vas | 323 l |
| Mechanical Compliance, Cms | 137 μm / N |
| Mechanical Resistance, Rms | 3 kg / s |
| Efficiency, ηo (%) | 2.4 |
| Effective Surface Area, Sd (m ²) | 0.1300 m ² |
| Maximum Displacement, Xmax | 7 mm. |
| Displacement Volume, Vd | 910 cm ³ |
| Voice Coil Inductance, Le @ 1 kHz | 3 mH |

DIMENSION DRAWINGS



MATERIALS

- **Voice coil:** edgewound copper wire with high temperature bonding strength. Polyimide fiber glass former able to withstand high temperatures.
- **Cone:** waterproof paper cone capable of endure the most extreme 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.

Polígono Industrial Moncada II · C/. Pont Sec, 1c · 46113 MONCADA - Valencia (Spain)

· Tel. (34) 96 130 13 75 · Fax (34) 96 130 15 07 · <http://www.beyma.com> · E-mail: beyma@beyma.com ·