beyma
PROFESSIONAL LOUDSPEAKERS

6MI100

MI100 Series

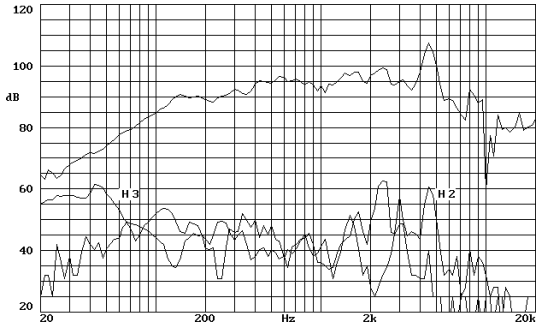
KEY FEATURES

- High power handling (250 W_{AES})
- Low harmonic distortion
- Controlled dispersion up to 3 kHz
- 2" edgewound aluminium voice coil with polyimide fiber glass former
- Designed for high quality mid-frequency reproduction

GENERAL DESCRIPTION

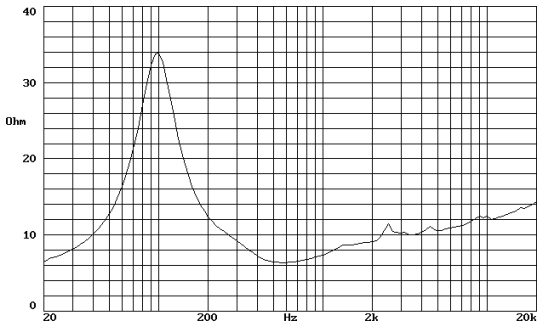
This low-mid frequency transducer offers three main points of interest: a good sensitivity (97 dB), a controlled dispersion up to 3 kHz and a low harmonic distortion. These characteristics make it suitable for high quality sound reinforcement systems, especially for live applications. Furthermore, it is mounted with a cast aluminium basket that reduces mechanical vibrations and increases thermal dissipation. This fact, added to the use of a high quality 2'' voice-coil, increases considerably the power handling reaching 250 W_{AES}.

FREQUENCY RESPONSE AND DISTORTION CURVES

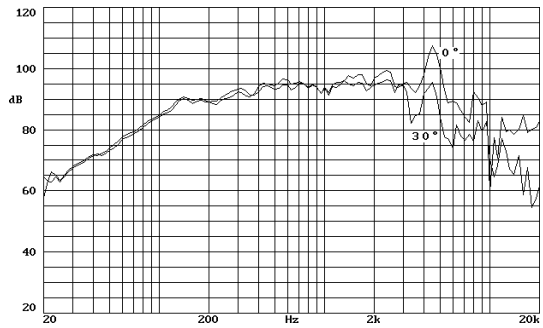


Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

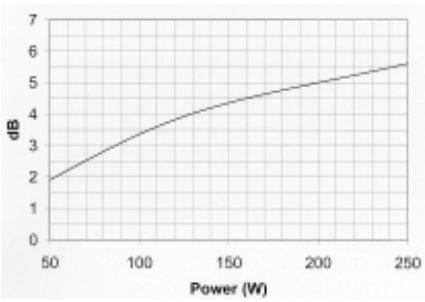
FREE AIR IMPEDANCE CURVE



FREQUENCY RESPONSE OUT OF AXIS



POWER COMPRESSION LOSSES



Note: These losses are calculated from a five minutes AES power test applying band limited pink noise (120-3500 Hz). The loudspeaker is free-air standing.

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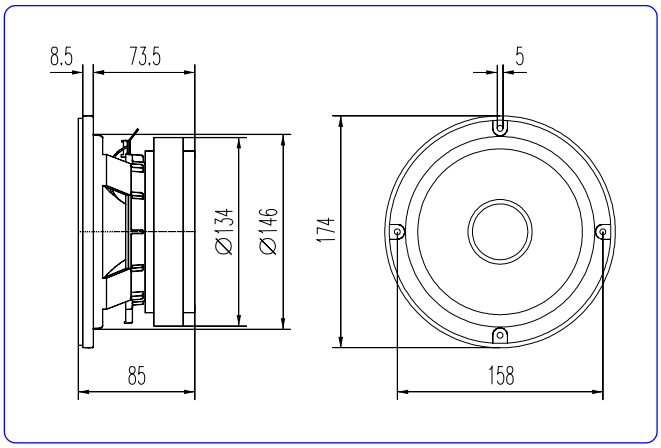
TECHNICAL SPECIFICATIONS

Nominal diameter		165 mm. 6.5 in.
Rated impedance		8 ohms
Minimum impedance		6.6 ohms
Power capacity		250 w AES
Program power		500 w
Sensitivity	97 dB	2.83v @ 1m @ 2π
Frequency range		150 - 6000 Hz
Voice coil diameter		51.7 mm. 2 in.
Magnetic assembly weight		2 kg. 4.4 lb.
BL factor		11.6 N / A
Moving mass		0.014 kg.
Voice coil length		8 mm
Air gap height		8 mm

DIMENSION DRAWINGS



MOUNTING INFORMATION

Overall diameter	174 mm. 6.85 in.
Bolt circle diameter	158 mm. 6.22 in.
Baffle cutout diameter:	
- Front mount	146 mm. 5.75 in.
- Rear mount	142 mm. 5.59 in.
Depth	85 mm. 3.35 in.
Volume displaced by driver	0.75 l 0.026 ft.^{3}
Net weight	2.2 kg. 4.84 lb.
Shipping weight	2.25 kg. 4.95 lb.

MATERIALS

- **Voice coil:** edgewound aluminium wire with high temperature bonding strength. Polyimide fiber glass former able to withstand high temperatures.
- **Cone:** light and stiff paper cone to provide good mid-frequency response.
- **Surround:** foam.
- **Spider:** cotton spider.
- **Metal parts:** effective protection against corrosion.
- **Basket:** specially designed die cast aluminium basket to avoid disturbing resonances.
- **Magnet:** high Curie temperature ferrite.

THIELE-SMALL PARAMETERS

Resonant frequency, fs	100 Hz
D.C. Voice coil resistance, Re	6 ohms.
Mechanical Quality Factor, Qms	1.9
Electrical Quality Factor, Qes	0.4
Total Quality Factor, Qts	0.33
Equivalent Air Volume to Cms, Vas	5 l
Mechanical Compliance, Cms	183 μm / N
Mechanical Resistance, Rms	4.6 kg / s
Efficiency, ηo (%)	1.4
Effective Surface Area, Sd (m²)	0.0140 m²
Maximum Displacement, Xmax	1 mm
Displacement Volume, Vd	14 cm.^{3}
Voice Coil Inductance, Le @ 1 kHz	0.2 mH

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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