

KEY FEATURES

- Very high efficiency (5.1 %)
- Extremely linear frequency response
- Low harmonic distortion
- 3" edgewound aluminium voice coil with polyimide fiber glass former
- Large magnetic assembly to provide efficient heat dissipation
- Designed for high quality mid-frequency reproduction

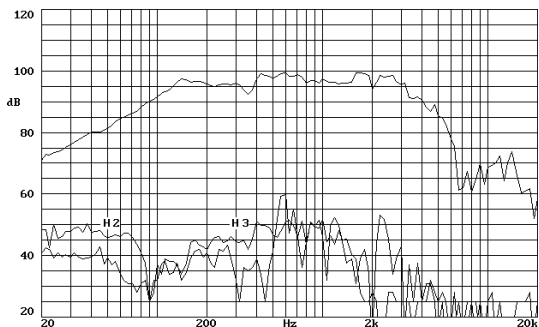


GENERAL DESCRIPTION

This low-mid frequency transducer offers three main points of interest: a high efficiency (5.1 %), an extremely linear frequency response and a low harmonic distortion. These characteristics make it suitable for high quality sound reinforcement systems, especially for live applications. Moreover, its versatile design allows it to be used as the low-mid loudspeaker in a two ways system or as an strictly mid-frequency transducer in a three ways system.

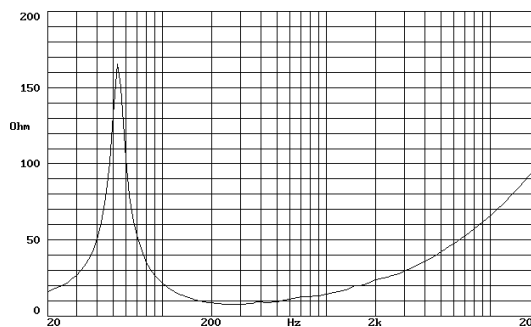
Beyond its frequency response advantages, this loudspeaker offers more: it takes profit of the improvements achieved in our low frequency-high power transducers. Thus, it incorporates a high quality voice coil and a large magnetic assembly to provide efficient heat dissipation. Thanks to this design concept of strongness, the 12 MI100 reaches a considerable power handling (450 W_{AES}).

FREQUENCY RESPONSE AND DISTORTION CURVES

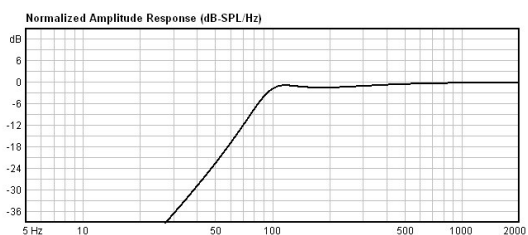


Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

FREE AIR IMPEDANCE CURVE

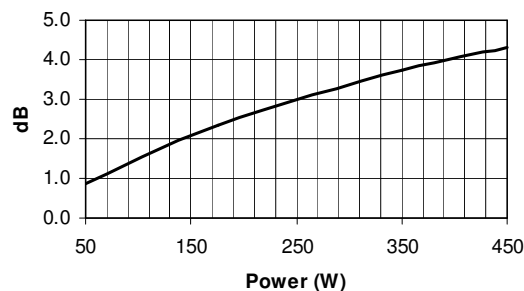


PREDICTED LOW FREQUENCY RESPONSE



Note: Bass-reflex cabinet, Vb=30 l, fb=94 Hz

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.

TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm.	12 in.
Rated impedance	8 ohms	
Minimum impedance	8 ohms	
Power capacity	450 w AES	
Program power	900 w	
Sensitivity	100 dB	2.83v @ 1m @ 2 π
Frequency range	40 - 4000 Hz	
Recom. enclosure vol.	20 / 50 l	0.7 / 1.75 ft. ³
Voice coil diameter	77 mm.	3 in.
Magnetic assembly weight	6.5 kg.	14.2 lb.
BL factor	21.6 N / A	
Moving mass	0.047 kg.	
Voice coil length	13.5 mm	
Air gap height	10 mm	
X damage (peak to peak)	24 mm	

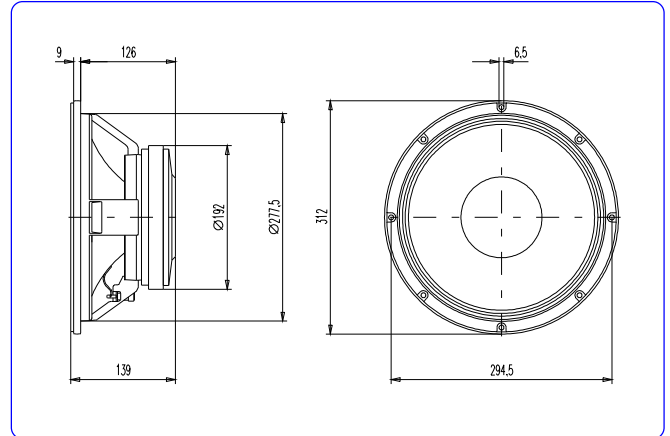
MOUNTING INFORMATION

Overall diameter	312 mm.	12.3 in.
Bolt circle diameter	294.5 mm.	11.6 in.
Baffle cutout diameter:		
- Front mount	277.5 mm.	10.9 in.
- Rear mount	280 mm.	11.02 in.
Depth	139 mm.	5.47 in.
Volume displaced by driver	5.5 l	0.19 ft. ³
Net weight	7.2 kg.	15.8 lb.
Shipping weight	8 kg.	17.6 lb.

THIELE-SMALL PARAMETERS

Resonant frequency, fs	58 Hz
D.C. Voice coil resistance, Re	6.3 ohms.
Mechanical Quality Factor, Qms	5.54
Electrical Quality Factor, Qes	0.23
Total Quality Factor, Qts	0.22
Equivalent Air Volume to Cms, Vas	64 l
Mechanical Compliance, Cms	163 μ m / N
Mechanical Resistance, Rms	3.3 kg / s
Efficiency, η (%)	5.1
Effective Surface Area, Sd (m ²)	0.0530 m ²
Maximum Displacement, Xmax	2 mm
Displacement Volume, Vd	105 cm. ³
Voice Coil Inductance, Le @ 1 kHz	1 mH

DIMENSION DRAWINGS



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:** treated cloth to mechanically equalize the frequency response.
- **Spider:** cotton spider.
- **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).