

KEY FEATURES

- Exceptional power handling: 125 w AES
- High sensitivity: 100 dB
- 1.5" (38.5 mm.) edgewound aluminium ribbon voice coil
- Aluminium basket
- High efficiency: 3.3 %
- Excellent dispersion control due to the use of a phase plug
- Low harmonic distortion
- Linear frequency response

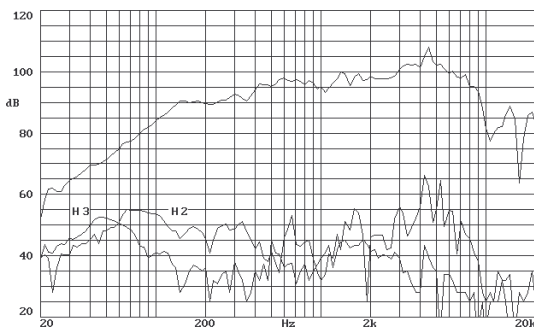


GENERAL DESCRIPTION

This 6.5" mid frequency loudspeaker has been designed on the basis of the 6MI90 with the purpose of improving the efficiency. The new one includes a high energy neodymium magnet that increases it and reduces the loudspeaker net weight. Thus, the 605Nd is 3 dB louder and 30% lighter than the ferrite version. By the other hand, this loudspeaker is mounted with an special cast aluminium basket that reduces mechanical vibrations and increases thermal dissipation.

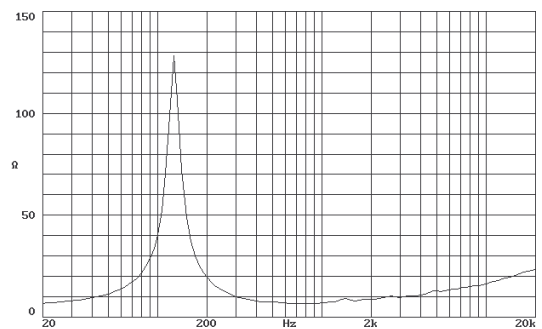
All these improvements, combined with the 6MI90 excellences (low harmonic distortion and extended frequency response), result in a superb transducer for sound reinforcement applications.

FREQUENCY RESPONSE AND DISTORTION CURVES

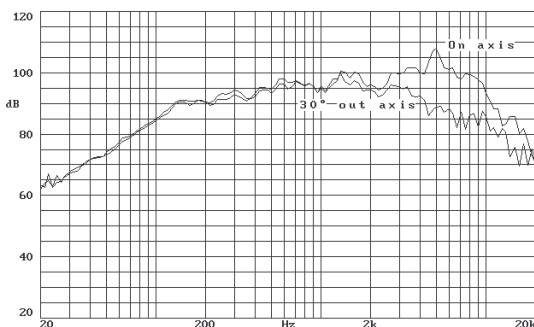


Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

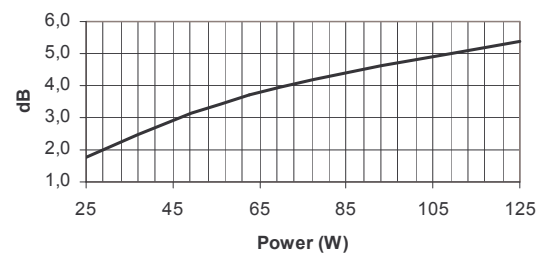
FREE AIR IMPEDANCE CURVE



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 (150-3500 Hz). The loudspeaker is free-air standing.

TECHNICAL SPECIFICATIONS

Nominal diameter	165 mm. 6.5 in.
Rated impedance	8 ohms.
Minimum impedance	6.6 ohms.
Power capacity *	125 w AES
Program power	250 w
Sensitivity	100 dB 2.83v @ 1m @ 2π
Frequency range	150 - 8000 Hz
Voice coil diameter	38.5 mm. 1.5 in.
Magnetic assembly weight	1.2 kg. 2.65 lb.
BL factor	13.15 N / A
Moving mass	0.010 kg.
Voice coil length	7 mm.
Air gap height	6 mm.

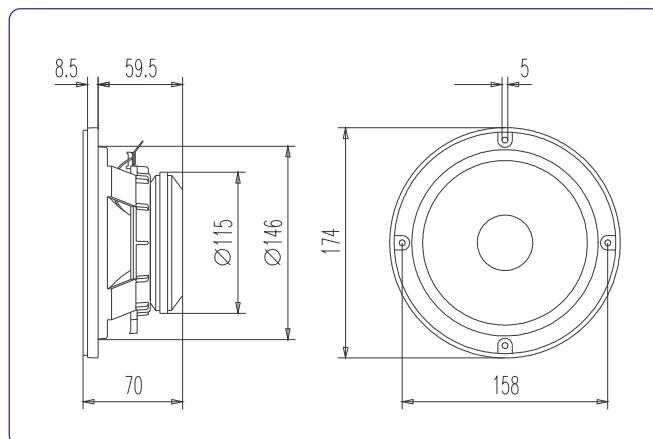
MOUNTING INFORMATION

Overall diameter	174 mm. 6.85 in.
Bolt circle diameter	158 mm. 6.22 in.
Baffle cutout diameter:	
- Front mount	148 mm. 5.83 in.
- Rear mount	142 mm. 5.59 in.
Depth	67 mm. 2.64 in.
Volume displaced by driver	0.75 l 0.03 ft. ³
Net weight	1.5 kg. 3.31 lb.
Shipping weight	1.75 kg. 3.86 lb.

THIELE-SMALL PARAMETERS **

Resonant frequency, fs	150 Hz
D.C. Voice coil resistance, Re	6 ohms.
Mechanical Quality Factor, Qms	9.68
Electrical Quality Factor, Qes	0.32
Total Quality Factor, Qts	0.31
Equivalent Air Volume to Cms, Vas	3 l
Mechanical Compliance, Cms	100 μm / N
Mechanical Resistance, Rms	1.1 kg / s
Efficiency, ηo (%)	3.3
Effective Surface Area, Sd (m ²)	0.0140 m ²
Maximum Displacement, Xmax	1 mm.
Displacement Volume, Vd	14 cm ³
Voice Coil Inductance, Le @ 1 kHz	0.5 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.
- **Surround:** foam.
- **Spider:** cotton spider.
- **Metal parts:** anti-corrosion coated parts designed to resist aggressive environmental conditions.
- **Basket:** specially designed die cast aluminium basket to avoid disturbing resonances.
- **Magnet:** high energy neodymium magnet.

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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