beyma

PROFESSIONAL LOUDSPEAKERS
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8BX/N

COAXIAL TRANSDUCER

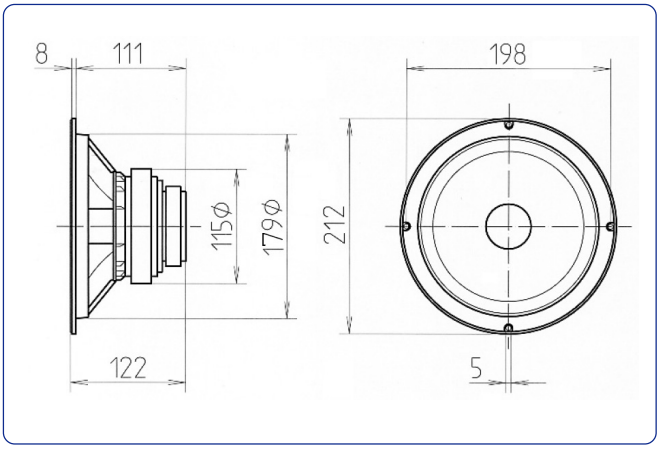
KEY FEATURES

- Considerable power handling: 100 w AES (low frequencies) and 20 w AES (high frequencies).
- Combination of a 8 inches bass loudspeaker and a compression tweeter.
- L.F. unit: 1.5 inch. (38.5 mm) aluminium voice coil.
- H.F. unit: 1 inch (25.8 mm) copper voice coil.
- Aluminium diaphragm tweeter.
- The concentric mounting reduces phasing problems in the crossover region.
- Linear and coherent response.

TECHNICAL SPECIFICATIONS

Nominal diameter	200 mm. 8 in.
Rated impedance	8 ohms
Minimum impedance	5.3 ohms
Power capacity*(LF/HF)	100 / 20 w AES
Program power(LF/HF)	200 / 40 w
Sensitivity (LF/HF)	92 dB / 102 dB 2.83v @ 1m @ 2π
Frequency range	60 - 20000 Hz
Recom. enclosure vol.	20 / 60 l 0.70 / 2.11 ft.^{3}
Voice coil diameter (LF/HF)	38.5 / 25.8 mm. 1.5 / 1 in.
Magnetic assembly weight	2 kg. 4.4 lb.
BL factor	6.8 N / A A
Moving mass	0.023 kg.
Voice coil length	14 mm
Air gap height	6 mm
X damage (peak to peak)	20 mm

DIMENSION DRAWINGS



THIELE-SMALL PARAMETERS**

Resonant frequency, fs	57 Hz
D.C. Voice coil resistance, Re	5.3 ohms
Mechanical Quality Factor, Qms	4.83
Electrical Quality Factor, Qes	0.77
Total Quality Factor, Qts	0.66
Equivalent Air Volume to Cms, Vas	22 l
Mechanical Compliance, Cms	326 µm / N
Mechanical Resistance, Rms	0.78 kg / s
Efficiency, ηo	0.41 %
Effective Surface Area, Sd	0.022 m^2
Maximum Displacement, Xmax* **	5 mm
Displacement Volume, Vd	110 cm^3
Voice Coil Inductance, Le @ 1 kHz	0.4 mH

MOUNTING INFORMATION

Overall diameter	212 mm.	8.34 in.
Bolt circle diameter	198 mm.	7.79 in.
Baffle cutout diameter:		
- Front mount	179 mm.	7.04 in.
- Rear mount	182 mm.	7.16 in.
Depth	111 mm.	4.37 in.
Volume displaced by driver	0.5 l.	0.017 ft.^{3}
Net weight	2.9 kg.	6.39 lb.
Shipping weight	3.1 kg.	6.83 lb.

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).

***The Xmax is calculated as (Lvc - Hag)/2 + Hag/3.5, where Lvc is the voice coil length and Hag is the air gap height.

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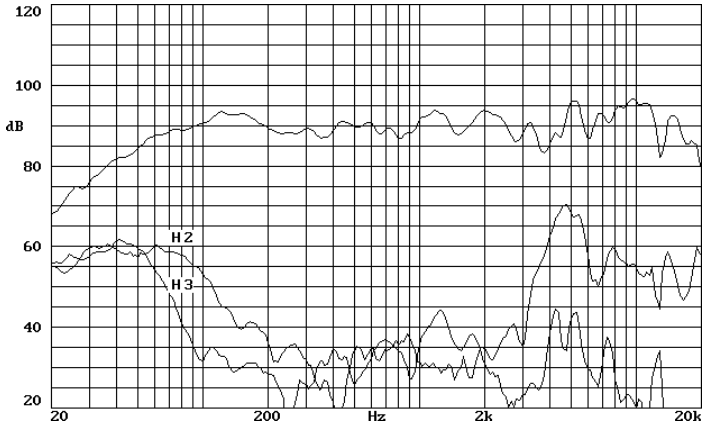
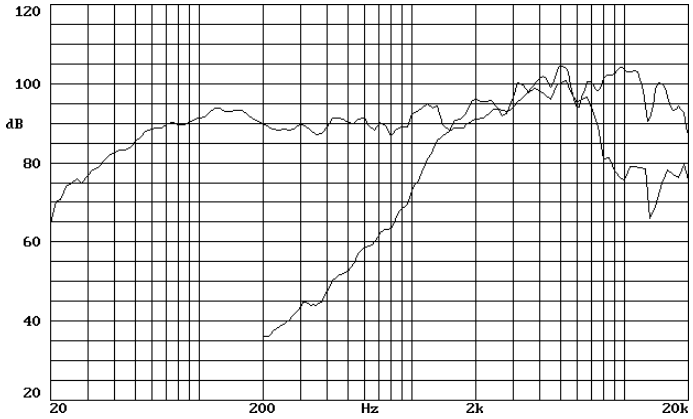
FREQUENCY RESPONSE AND DISTORTION CURVES



Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.
Crossover frequency set at 3,75 kHz @ 12dB/oct.

FREQUENCY RESPONSE OF LF & HF UNITS



OFF-AXIS FREQUENCY RESPONSE