

PROFESSIONAL LOUDSPEAKERS www.beyma.com

# 12XA30/Nd COAXIAL TRANSDUCER

# KEY FEATURES

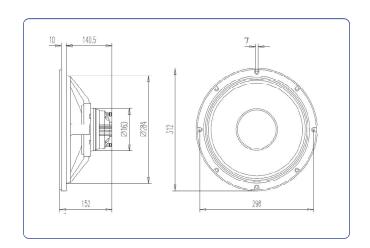
- 12 bass loudspeaker and 2 exit compression driver combination.
- Excellent power handling: 350 w AES (L.F. unit) and 90 w AES (H.F. unit).
- Extended and linear frequency response (25 20.000 Hz).
- High sensitivity: 98 dB (L.F. unit) and 105 dB (H.F. unit).
- Low weight (common neodymium magnet system for both units).
- Bass loudspeaker designed for compact bass-reflex cabinets.



# TECHNICAL SPECIFICATIONS

Nominal diameter 300 mm. 12 in. Rated impedance (LF/HF) 8 / 16 ohms Minimum impedance (LF/HF) 7.6 / 13.5 ohms Power capacity\*(LF/HF) 350 / 90 w AES Program power(LF/HF) 700 / 180 w 98 dB / 105 dB 1W @ 1m @ 2p Sensitivity (LF/HF) Frequency range 35 - 20000 Hz **Recom. HF crossover** 1.8kHz or higher (12dB/oct. min slope) Voice coil diameter 100 mm. 4 in. Magnetic assembly weight 4.2 kg. 9.24 lb. **BL** factor 18.2 N/A **Moving mass** 0.047 kg. Voice coil length 16 mm Air gap height 9 mm X damage (peak to peak) 28 mm

### DIMENSION DRAWINGS



# THIELE-SMALL PARAMETERS\*\*

Resonant frequency, fs	35 Hz
D.C. Voice coil resistance, Re	6.8 ohms
Mechanical Quality Factor, Qms	7.98
Electrical Quality Factor, Qes	0.22
Total Quality Factor, Qts	0.21
Equivalent Air Volume to Cms, Vas	172
Mechanical Compliance, Cms	430 mm / N
Mechanical Resistance, Rms	1.36 kg / s
Efficiency, ho (%)	3.3
Effective Surface Area, Sd (m²)	$0.0530  m^2$
Maximum Displacement, Xmax***	4 mm
Displacement Volume, Vd	210 cm <sup>3</sup>
Voice Coil Inductance, Le @ 1 kHz	1.3 mH

### **MOUNTING INFORMATION**

Overall diameter	312 mm.	12.28 in.
Bolt circle diameter	298 mm.	11.73 in.
Baffle cutout diameter:		
- Front mount	284 mm.	11.18 in.
- Rear mount	280 mm.	11.02 in.
Depth	152 mm.	5.98 in.
Volume displaced by driver	6.5 l.	0.23 ft. <sup>3</sup>
Net weight	6.3 kg.	13.86 lb.
Shipping weight	7 kg.	15.4 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.

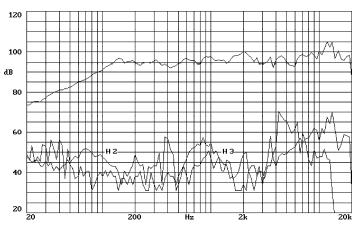
The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

\*\*\*The Xmax is calculated as (Lvc - Hag)/2 + Hag/3.5, where Lvc is the voice coil length and Hag is the
original pair (Lyc - Hag)/2 + Hag/3.5, where Lvc is the voice coil length and Hag is the



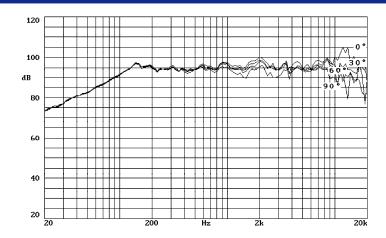
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# FREQUENCY RESPONSE AND DISTORTION



Note: On axis filtered frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m with FD2XA.

# OFF-AXIS FREQUENCY RESPONSE



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