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PROFESSIONAL LOUDSPEAKERS
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12CXA400Fe
COAXIAL TRANSDUCER

KEY FEATURES

- 12” coaxial with 4” voice coil woofer and 2,85” voice coil compression driver
- Program power: 800 / 160 W_{AES} (LF / HF)
- Sensitivity: 96 dB LF and 105 dB HF
- Common ferrite magnet system design
- Demodulating rings in both LF and HF units
- Composite titanium / mylar diaphragm
- Waterproof LF cone
- 60º coverage horn for HF dispersion control

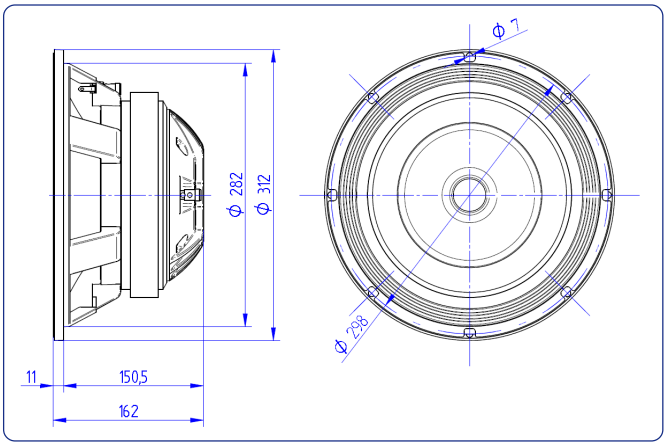
TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm	12 in
Rated impedance (LF/HF)	8 / 16 Ω	
Minimum impedance (LF/HF)	6,2 / 12,2 Ω	
Power capacity* (LF/HF)	400 / 80 W_{AES}	
Program power (LF/HF)	800 / 160 W	
Sensitivity (LF/HF**)	96 dB 1W @ Z_N	
	105 dB 1W @ Z_N	
Frequency range	40 - 20.000 Hz	
Recom. HF crossover	1,5 kHz or higher (12 dB/oct min slope)	
Voice coil diameter (LF/HF)	101,6 mm	4 in
	72,2 mm	2,87 in
BL factor	19,8 N/A	
Moving mass	0,066 kg	
Voice coil length	16 mm	
Air gap height	10 mm	
X_{damage} (peak to peak)	51 mm	

THIELE-SMALL PARAMETERS***

Resonant frequency, f_s	42 Hz
D.C. Voice coil resistance, R_e	6,6 Ω
Mechanical Quality Factor, Q_{ms}	7,20
Electrical Quality Factor, Q_{es}	0,26
Total Quality Factor, Q_{ts}	0,25
Equivalent Air Volume to C_{ms}, V_{as}	94 l
Mechanical Compliance, C_{ms}	220 μm / N
Mechanical Resistance, R_{ms}	2,40 kg / s
Efficiency, η_0	2,2 %
Effective Surface Area, S_d	0,055 m^2
Maximum Displacement, X_{max} ****	6 mm
Displacement Volume, V_d	210 cm^3
Voice Coil Inductance, L_e @ 1 kHz	1,1 mH

DIMENSION DRAWINGS



MOUNTING INFORMATION

Overall diameter	311,7 mm	12,27 in
Bolt circle diameter	298 mm	11,73 in
Baffle cutout diameter:		
- Front mount	282,6 mm	11,13 in
Depth	165 mm	6,5 in
Volume displaced by driver	6,5 l	0,23 ft^3
Net weight	11,3 kg	24,9 lb
Shipping weight	11,7 kg	25,8 lb

Notes:

* The power capaticty is determined according to AES2-1984 (r2003) standard. Program power is defined as the transducer’s ability to handle normal music program material.

** Sensitivity was measured at 1m distance, on axis, with 1W input, averaged in the range 1 - 7 kHz.

*** 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 X_{max} is calculated as $(L_{vc} - H_{ag})/2 + (H_{ag}/3{,}5)$, where L_{vc} is the voice coil length and H_{ag} is the air gap height.

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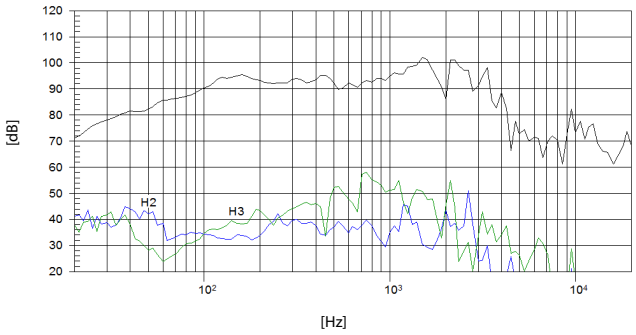
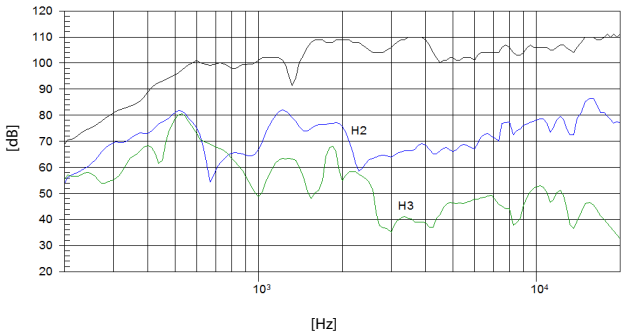
FREQUENCY RESPONSE AND DISTORTION

LOW FREQUENCY RESPONSE

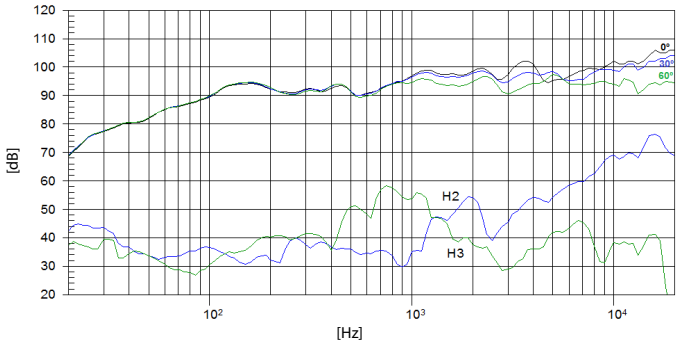


HIGH FREQUENCY RESPONSE



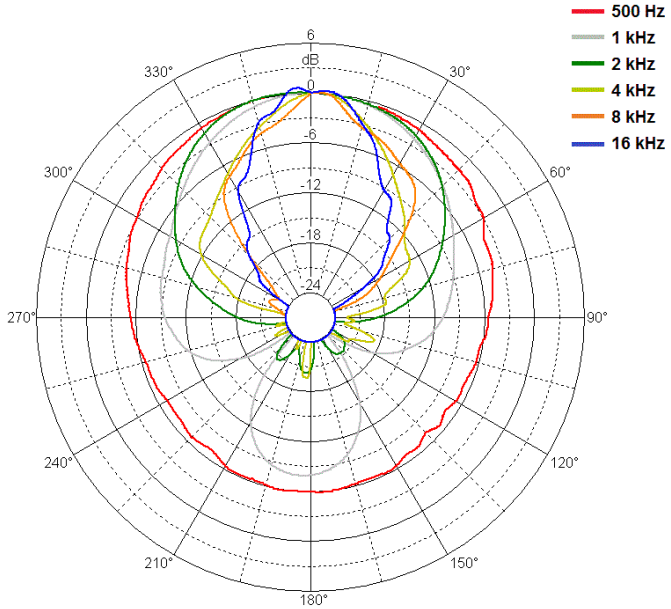
Note: On axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

FILTERED FREQUENCY RESPONSE

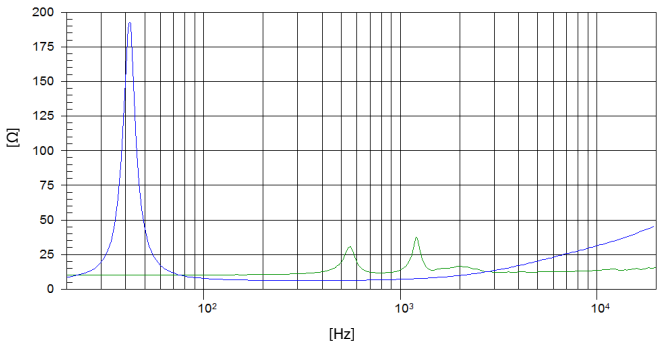


Note: Filtered frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m with FD-2XA

POLAR PATTERN



FREE AIR IMPEDANCE CURVE



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Polígono Industrial Moncada II ▪ C/. Pont Sec, 1c ▪ 46113 MONCADA - Valencia (Spain)
▪ Tel.: (34) 96 130 13 75 ▪ Fax: (34) 96 130 15 07 ▪ http://www.beyma.com ▪ E-mail: beyma@beyma.com ▪