

12XA30Nd

COAXIAL TRANSDUCER

KEY FEATURES

- 12" bass loudspeaker and 2" exit compression driver
- Power handling: 350 / 90 W_{AES} (LF / HF)
- High sensitivity: 98 / 105 dB (1W / 1m) (LF / HF)
- · Extended and linear frequency response
- Demodulating rings in both LF and HF units

- 4" aluminium voice coil for LF unit
- 2,85" aluminium voice coil for HF unit
- Composite Titanium / Polyester HF diaphragm
- Common neodymium magnet system design (low weight)
- Designed for compact bass-reflex cabinets





TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm		12 in
Rated impedance (LF/HF)			8 / 16 Ω
Minimum impedance (LF/HF)		7,	6 / 13,5 Ω
Power capacity 1 (LF/HF)		350 /	90 W _{AES}
Program power ² (LF/HF)		70	0 / 180 W
Sensitivity (LF/HF ³)	98 dB	1W /	1m @ Z _N
	105 dB	1W /	1m @ Z _N
Frequency range		40 - 2	20.000 Hz
Recom. HF crossover	1,8 kHz or higher (12 dB/oct min slope)		
Voice coil diameter (LF/HF)	101,6	mm	4 in
	72,4	mm	2,85 in
BI 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

THIELE-SMALL PARAMETERS 4

Resonant frequency, f _s	35 Hz
D.C. Voice coil resistance, R _e	6,8 Ω
Mechanical Quality Factor, Q _{ms}	8
Electrical Quality Factor, Q _{es}	0,22
Total Quality Factor, Qts	0,21
Equivalent Air Volume to C _{ms} , V _{as}	172 I
Mechanical Compliance, C _{ms}	430 μm / N
Mechanical Resistance, R _{ms}	1,4 kg / s
Efficiency, η ₀	3,3 %
Effective Surface Area, S _d	0,053 m ²
Maximum Displacement, X _{max} ⁵	6 mm
Displacement Volume, V _d	318 cm ³
Voice Coil Inductance, Le	1,3 mH

Notes

¹ The power capaticty is determined according to AES2-1984 (r2003) standard.

² Program power is defined as power capacity + 3 dB.

³ Sensitivity was measured at 1m distance, on axis, with 1W input, averaged in the range 1 - 7 kHz

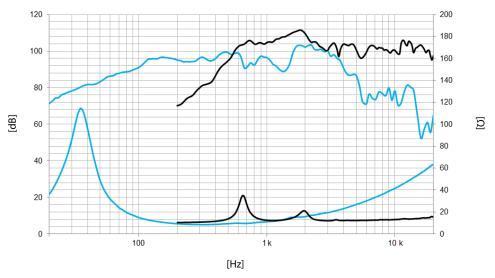
⁴ T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

 $^{^{\}rm 5}$ 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.



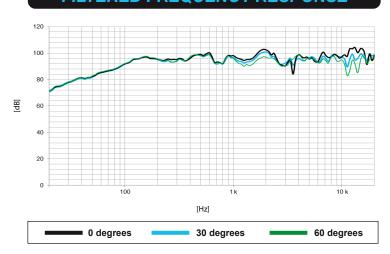
12XA30Nd

COAXIAL TRANSDUCER



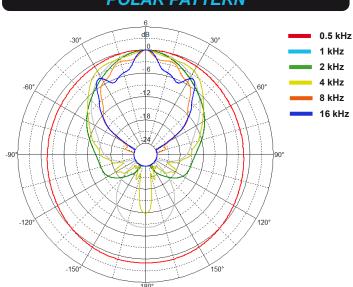
Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

FILTERED FREQUENCY RESPONSE



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

POLAR PATTERN



MOUNTING INFORMATION

Overall diameter	312 mm	12,3 in
Bolt circle diameter	298 mm	11,7 in
Baffle cutout diameter:		
- Front mount	283 mm	11,1 in
Depth	152 mm	6,0 in
Net weight	6,3 kg	13,9 lb
Shipping weight	7 kg	15,4 lb

DIMENSION DRAWING

