

PROFESSIONAL LOUDSPEAKERS

# 12P80Nd

MID/LOW FREQUENCY TRANSDUCER P80Nd series

### **KEY FEATURES**

- 700 W AES power handling capacity
- High sensitivity: 101dB 2.83v @ 1m @ 2ð
- Excellent efficiency
- Wide usable frequency range and low harmonic distortion
- Low Resonant frequency: 45 Hz
- Extended controlled displacement: Xmax ± 7.5 mm
- Extended mechanical displacement capability: Xpp 52 mm
- Forced air convection circuit for low power compression losses
- CONEX spider
- Designed with MMSS technology

### **TECHNICAL SPECIFICATIONS**

Nominal diameter	300 mm. 12 in.
Rated impedance	8 ohms
Minimum impedance	6.4 ohms
Power capacity*	700 w AES
Program power	1400 w
Sensitivity	101 dB 2.83v @ 1m @ 2ð
Frequency range	25 - 4000 Hz
Recom. enclosure vol.	20/ 60 I 0.7 / 2.24 ft. <sup>3</sup>
Voice coil diameter	100 mm. 4 in.
Magnetic assembly weight	4.62 kg. 10.16 lb.
BL factor	23.1 N / A
Moving mass	0.056 kg.
Voice coil length	20 mm
Air gap height	12 mm
X damage (peak to peak)	52 mm

### THIELE-SMALL PARAMETERS\*\*

Resonant frequency, fs	45 Hz
D.C. Voice coil resistance, Re	5.2 ohms
Mechanical Quality Factor, Qms	6.6
Electrical Quality Factor, Qes	0.15
Total Quality Factor, Qts	0.15
Equivalent Air Volume to Cms, Vas	95.7 Ι
Mechanical Compliance, Cms	227 μm / N
Mechanical Resistance, Rms	2.39 kg / s
Efficiency, ηο (%)	5.4
Effective Surface Area, Sd (m <sup>2</sup> )	0.055 m <sup>2</sup>
Maximum Displacement, Xmax***	7.5 mm
Displacement Volume, Vd	413 cm³
Voice Coil Inductance, Le @ 1 kHz	1.2 mH



### **DIMENSION DRAWINGS**



### MOUNTING INFORMATION

Overall diameter Bolt circle diameter Baffle cutout diameter:	312 mm. 12.28 in. 294 mm. 11.57 in.
- Front mount	282.5 mm. 11.12 in.
- Rear mount	280 mm. 11.02 in.
Depth	130 mm. 5.12 in.
Volume displaced by driver	4 l. 0.14 ft. <sup>3</sup>
Net weight	5.6 kg. 12.32 lb.
Shipping weight	6.3 kg. 13.86 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



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

### FREE AIR IMPEDANCE CURVE



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