

12P80FeV2

LOW FREQUENCY TRANSDUCER P80 Series

KEY FEATURES

- 700 W_{AES} power handling capacity
- High sensitivity: 99 dB (1W / 1m)
- Wide usable frequency range
- Low harmonic distortion
- Low resonant frequency: 48 Hz
- Low power compression losses

- Waterproof cone with treatment for both sides
- 4" DUO double layer in/out aluminium voice coil
- Conex spider
- Extended controlled displacement: $X_{max} \pm 7,5$ mm
- 52 mm peak-to-peak excursion before damage



TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm	12 in
Rated impedance		8 Ω
Minimum impedance		7 Ω
Power capacity ¹	700 W _{AES}	
Program power ²		1.400 W
Sensitivity	99 dB 1W / 1	m @ Z _N
Frequency range	50 - 4	4.000 Hz
Recom. enclosure		V _b = 40 I
(Bass-reflex design)	F _b = 75 Hz	
Voice coil diameter	101,6 mm	4 in
BI factor		23 N/A
Moving mass		0,076 kg
Voice coil length		20 mm
Air gap height		12 mm
X _{damage} (peak to peak)		52 mm



THIELE-SMALL PARAMETERS³

Resonant frequency, f _s	48 Hz
D.C. Voice coil resistance, R _e	5,Ω
Mechanical Quality Factor, Q _{ms}	6,5
Electrical Quality Factor, Q _{es}	0,22
Total Quality Factor, Q _{ts}	0,21
Equivalent Air Volume to C _{ms} , V _{as}	61 I
Mechanical Compliance, C _{ms}	143 μm / N
Mechanical Resistance, R _{ms}	3,5 kg / s
Efficiency, η ₀	3 %
Effective Surface Area, S _d	0,055 m²
Maximum Displacement, X _{max} ⁴	7,5 mm
Displacement Volume, V _d	412 cm ³
Voice Coil Inductance, L _e	1,1 mH

Notes:

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

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

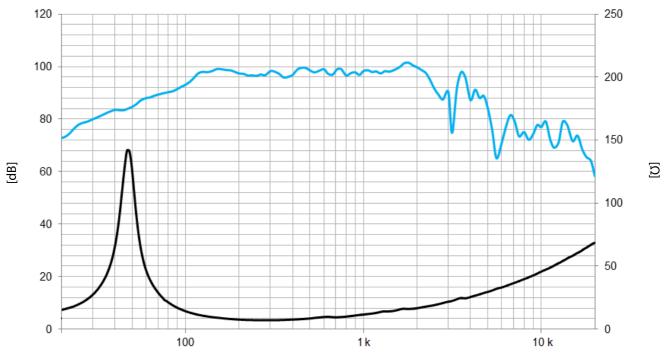
^a T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

⁴ 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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[Hz]

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

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	135 mm	5,3 in	
Net weight	11,5 kg	25,3 lb	
Shipping weight	12,2 kg	26,9 lb	

DIMENSION DRAWING

