beyma

PROFESSIONAL LOUDSPEAKERS

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15P80Nd

LOW FREQUENCY TRANSDUCER

P80 Series

KEY FEATURES

- 1.600 W program power
- High sensitivity: 101 dB (1W / 1m)
- FEA optimized neodymium magnetic circuit
- Forced air convection for low power compression
- Conex spider
- Weatherproof cone with treatment for both sides
- 4" DUO double layer in/out voice coil
- Extended controlled displacement: X_{max} ± 7,5 mm
- 52 mm peak-to-peak excursion before damage





TECHNICAL SPECIFICATIONS

Nominal diameter	380 mm	15 in
Rated impedance		8 Ω
Minimum impedance		7 Ω
Power capacity [1]		800 W_{AES}
Program power [2]		1.600 W
Sensitivity	101 dB	1W / 1m @ Z_N
Frequency range		40 - 4.000 Hz
Recom. enclosure		V_b = 75 l
(Bass-reflex design)		F_b = 59 Hz
Voice coil diameter	101,6 mm	4 in
Bl factor		23,8 N/A
Moving mass		0,098 kg
Voice coil length		20 mm
Air gap height		12 mm
X_{damage} (peak to peak)		52 mm

THIELE-SMALL PARAMETERS [3]

Resonant frequency, f_s	39 Hz
D.C. Voice coil resistance, R_e	5,1 Ω
Mechanical Quality Factor, Q_{ms}	5,1
Electrical Quality Factor, Q_{es}	0,22
Total Quality Factor, Q_{ts}	0,21
Equivalent Air Volume to C_{ms}, V_{as}	184 l
Mechanical Compliance, C_{ms}	168 μm / N
Mechanical Resistance, R_{ms}	4,7 kg / s
Efficiency, η_0	4,9 %
Effective Surface Area, S_d	0,088 m^2
Maximum Displacement, X_{max} [4]	7,5 mm
Displacement Volume, V_d	660 cm^3
Voice Coil Inductance, L_e	0,8 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] 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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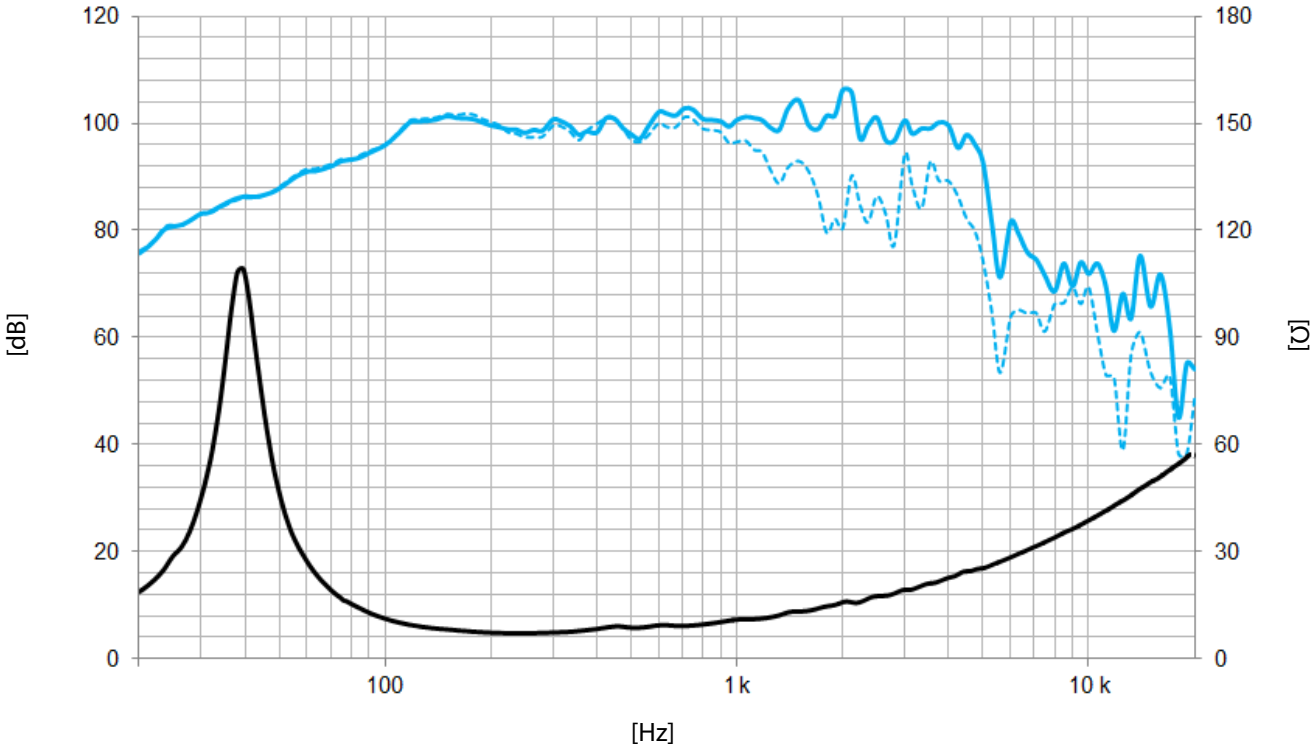
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Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

Frequency response on axis
Frequency response 45º off axis

MOUNTING INFORMATION

Overall diameter	388 mm	15,3 in
Bolt circle diameter	370 mm	14,6 in
Baffle cutout diameter:		
- Front mount	352 mm	13,9 in
Depth	161 mm	6,3 in
Net weight	6 kg	13,2 lb
Shipping weight	7 kg	15,4 lb

DIMENSION DRAWING

