

12WRS400

LOW FREQUENCY TRANSDUCER
Preliminary Data Sheet

KEY FEATURES

- High power handling: 800 W program power
- 3" copper wire voice coil
- High sensitivity: 97 dB (1W / 1m)
- · Optimized pressed steel frame
- · FEA optimized ceramic magnetic circuit
- Designed with MMSS technology for high control, linearity and low harmonic distortion
- · Waterproof cone treatment on both sides of the cone
- · Low harmonic distortion and linear response
- Wide range of applications of low and mid-low frequencies



Nominal diameter	300 mm	12 in
Rated impedance		8 Ω
Minimum impedance		7 Ω
Power capacity*	400 W _{AES}	
Program power		800 W
Sensitivity	97 dB 1W / 1n	า @ Z _N
Frequency range	45 - 4.	000 Hz
Voice coil diameter	76,2 mm	3 in
BI factor	17	7,3 N/A
Moving mass	0,	060 kg
Voice coil length		16 mm
Air gap height		8 mm
X _{damage} (peak to peak)		30 mm

THIELE-SMALL PARAMETERS**

Resonant frequency, f _s	41 Hz
D.C. Voice coil resistance, R _e	5,6 Ω
Mechanical Quality Factor, Q _{ms}	5,1
Electrical Quality Factor, Q _{es}	0,30
Total Quality Factor, Qts	0,28
Equivalent Air Volume to C _{ms} , V _{as}	97 I
Mechanical Compliance, C _{ms}	245 μm / N
Mechanical Resistance, R _{ms}	3,1 kg / s
Efficiency, η ₀	2,25 %
Effective Surface Area, S _d	0,053 m ²
Maximum Displacement, X _{max} ***	6,3 mm
Displacement Volume, V _d	334 cm ³
Voice Coil Inductance, L _e @ 1 kHz	1,3 mH

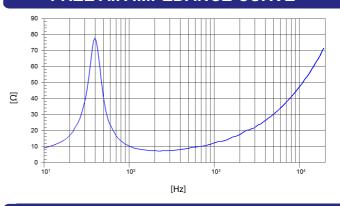
Notes:



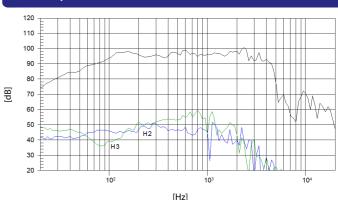
MOUNTING INFORMATION

Overall diameter	306 mm	12,05 in
Bolt circle diameter	292 mm	11,50 in
Baffle cutout diameter:		
- Front mount	280 mm	11,02 in
Depth	130 mm	5,12 in
Net weight	5,5 kg	12,12 lb
Shipping weight	6 kg	13,23 lb

FREE AIR IMPEDANCE CURVE



FREQUENCY RESPONSE & DISTORTION



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

^{*} 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.

^{**} 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