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12WRS400
LOW FREQUENCY TRANSDUCER
WRS Series

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

TECHNICAL SPECIFICATIONS

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 / 1m @ Z$_N$
Frequency range		45 - 4.000 Hz
Recom. enclosure vol.	30 / 100 l	1,06 / 3,53 ft^3
Voice coil diameter	77 mm	3 in
Bl factor		17,8 N/A
Moving mass		0,065 kg
Voice coil length		16 mm
Air gap height		8 mm
X$_{damage}$ (peak to peak)		30 mm

THIELE-SMALL PARAMETERS**

Resonant frequency, f$_s$	44 Hz
D.C. Voice coil resistance, R$_e$	5,6 Ω
Mechanical Quality Factor, Q$_{ms}$	7,7
Electrical Quality Factor, Q$_{es}$	0,32
Total Quality Factor, Q$_{ts}$	0,31
Equivalent Air Volume to C$_{ms}$, V$_{as}$	77,9 l
Mechanical Compliance, C$_{ms}$	196 μm / N
Mechanical Resistance, R$_{ms}$	2,4 kg / s
Efficiency, η$_0$	2 %
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

DIMENSION DRAWINGS
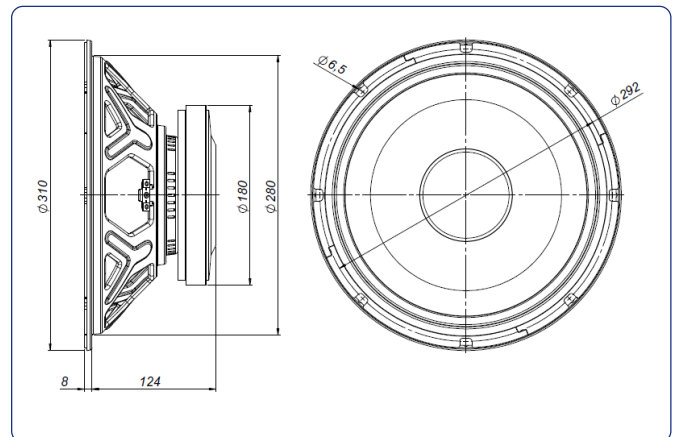
MOUNTING INFORMATION

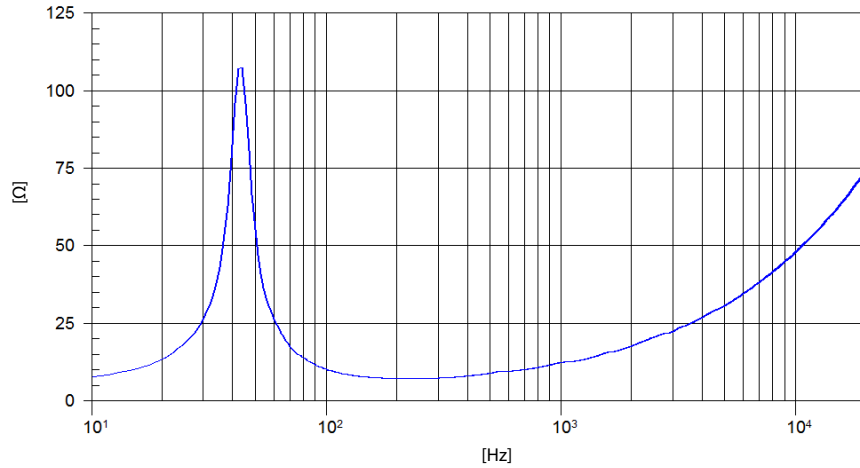|		
Overall diameter	310 mm	12,20 in
Bolt circle diameter	292 mm	11,50 in
Baffle cutout diameter:		
- Front mount	280 mm	11,02 in
Depth	132 mm	5,20 in
Net weight	5,5 kg	12,12 lb
Shipping weight	6 kg	13,23 lb

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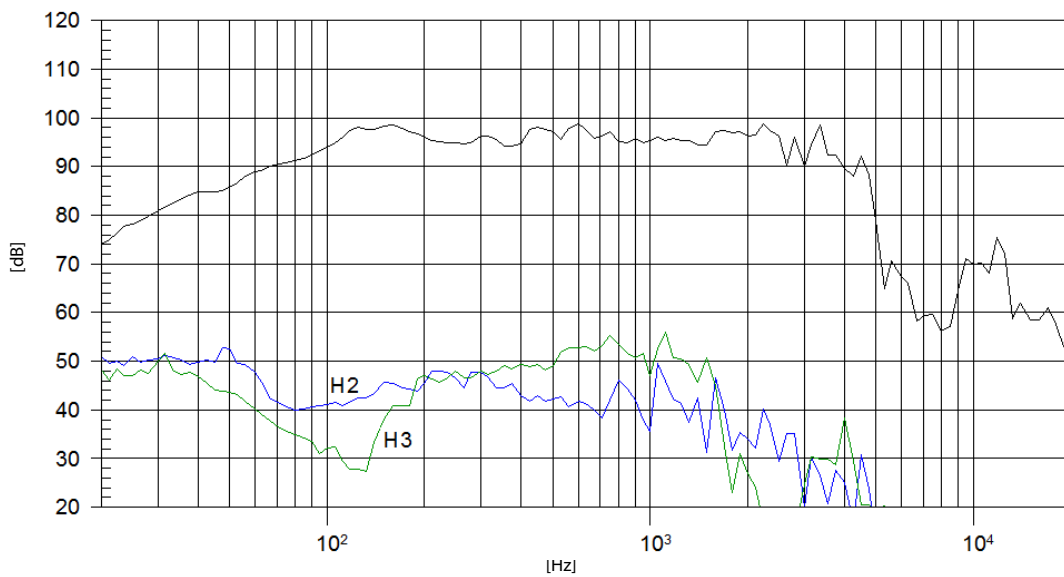
** T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

*** The 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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PROFESSIONAL LOUDSPEAKERS
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LOW FREQUENCY TRANSDUCER
WRS Series

FREE AIR IMPEDANCE CURVE

FREQUENCY RESPONSE AND DISTORTION

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