

18PW1400/Fe

LOW FREQUENCY TRANSDUCER

Preliminary Data Sheet

KEY FEATURES

- High power handling: 1400 WAES
- Malt Cross[®] Cooling System
- Lower power compression looses
- High sensitivity: 98 dB
- FEA optimized ferrite magnetic circuit
- Designed with MMSS technology for high control, linearity and low harmonic distortion
- Optimized nonlinear parameters
- Waterproof NCR membrane (Neck Coupling Reinforcement) with treatment for both sides of the cone
- 4" DUO double layer inner/outer voice coil
- Aluminium demodulating ring
- Extended controlled displacement: X_{max} ± 10 mm
- Massive mechanical displacement capability: X_{damage} ± 55 mm

TECHNICAL SPECIFICATIONS

Nominal diameter	460 mm 18 in
Rated impedance	8 Ω
Minimum impedance	5,68 Ω
Power capacity*	1.400 W _{AES}
Program power	2.800 W
Sensitivity	98 dB @ 1W @ Z _N
Frequency range	25 - 1.800 Hz
Recom. enclosure vol.	80 / 200 I 2,8 / 7 ft ³
Voice coil diameter	100 mm 4 in
BI factor	27,1 N/A
Moving mass	0,234 kg
Voice coil length	25 mm
Air gap height	12 mm
X _{damage} (peak to peak)	55 mm

THIELE-SMALL PARAMETERS**

Resonant frequency, f _s	36 Hz
D.C. Voice coil resistance, R _e	4,95 Ω
Mechanical Quality Factor, Q _{ms}	10,45
Electrical Quality Factor, Qes	0,36
Total Quality Factor, Q _{ts}	0,35
Equivalent Air Volume to C _{ms} , V _{as}	179,6 I
Mechanical Compliance, C _{ms}	81 μm / N
Mechanical Resistance, R _{ms}	5,16 kg / s
Efficiency, η ₀	2,33 %
Effective Surface Area, S _d	0,1255 m ²
Maximum Displacement, X _{max} ***	10 mm
Displacement Volume, V _d	1250 cm ³
Voice Coil Inductance, L _e	1,0 mH

Notes

* 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.



MOUNTING INFORMATION

Overall diameter	462 mm	18,19 in
Bolt circle diameter	438 mm	17,24 in
Baffle cutout diameter:		
- Front mount	413 mm	16,26 in
- Rear mount	418 mm	16,46 in
Depth	213 mm	8,39 in
Net weight	16,9 kg	37,26 lb

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