beyma

PROFESSIONAL LOUDSPEAKERS
www.beyma.com

18SW1600Nd

LOW FREQUENCY TRANSDUCER

KEY FEATURES

helicex TECHNOLOGY

- HELICEX® cooling technology
- 1600W AES power handling capacity
- High sensitivity: 97dB @ 2.83v
- Low resonant frequency: 32 Hz
- Extended controlled displacement: Xmax ± 10 mm
- Massive mechanical displacement capability: Xpp 60mm
- Exclusive NCR membrane (Neck Coupling Reinforcement)
- Designed with MMSS technology
- 5" DUO double inner/outer voice coil winding
- CONEX Spider with Die Cast Aluminum Ring

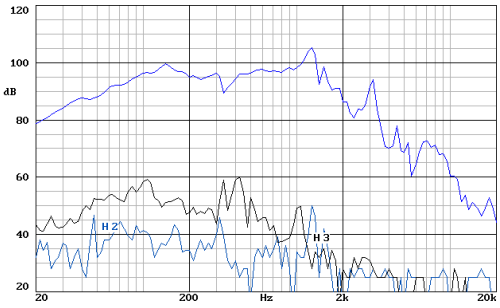
TECHNICAL SPECIFICATIONS

Nominal diameter	460mm. 18 in.
Rated impedance	8 ohms
Minimum impedance	6.1 ohms
Power capacity*	1600 w AES
Program power	3200 w
Sensitivity	97 dB 2.83v @ 1m @ 2π
Frequency range	25 - 1800 Hz
Recom. enclosure vol.	80 / 200 l 2.8 / 7 ft.^{3}
Voice coil diameter	126 mm. 5 in.
Magnetic assembly weight	7.59 kg. 16.7 lb.
BL factor	29 N / A
Moving mass	0.260 kg.
Voice coil length	25 mm
Air gap height	14 mm
X damage (peak to peak)	60 mm

THIELE-SMALL PARAMETERS**

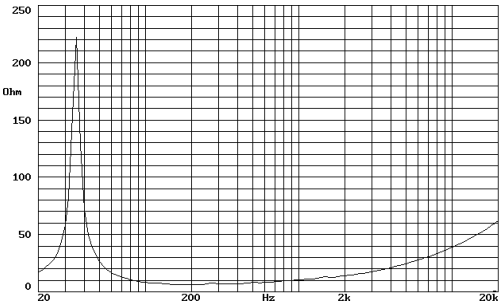
Resonant frequency, fs	32 Hz
D.C. Voice coil resistance, Re	5.5 ohms
Mechanical Quality Factor, Qms	11.74
Electrical Quality Factor, Qes	0.34
Total Quality Factor, Qts	0.33
Equivalent Air Volume to Cms, Vas	205.7 l
Mechanical Compliance, Cms	94.3 µm / N
Mechanical Resistance, Rms	4.46 kg / s
Efficiency, ηo (%)	1.93
Effective Surface Area, Sd (m²)	0.1255 m²
Maximum Displacement, Xmax* **	10 mm
Displacement Volume, Vd	1164 cm³
Voice Coil Inductance, Le @ 1 kHz	3.1 mH

FREQUENCY RESPONSE AND DISTORTION

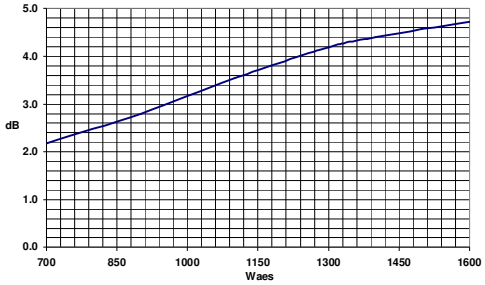


Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

FREE AIR IMPEDANCE CURVE



POWER COMPRESSION LOSSES



Note: Power Compression Losses were calculated after 2 hours period applying a pink noise signal filtered between 25 and 200 Hz.

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 Xmax is calculated as (Lvc - Hag)/2 + Hag/3.5, where Lvc is the voice coil length and Hag is the air gap height.