

PROFESSIONAL LOUDSPEAKERS www.beyma.com

# 12SW1300Nd

LOW FREQUENCY TRANSDUCER SW1600Nd series

# **KEY FEATURES**



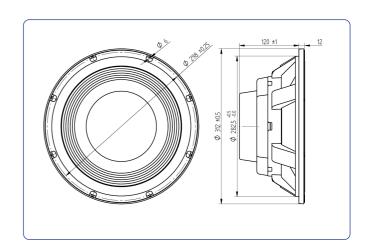
- HELICEX® cooling technology
- 1300W AES power handling capacity
- High sensitivity: 96dB @ 2.83v
- Low resonant frequency: 45Hz
- Extended controlled displacement: Xmax ± 10 mm
- Massive mechanical displacement capability: Xpp 60mm
- Designed with MMSS technology
- 4" DUO double inner/outer voice coil winding
- CONEX Spider



# TECHNICAL SPECIFICATIONS

Nominal diameter	300mm. 12 in.
Rated impedance	8 ohms
Minimum impedance	6.2 ohms
Power capacity*	1300 w AES
Program power	2600 w
Sensitivity	96 dB $2.83v @ 1m @ 2\pi$
Frequency range	25 - 1800 Hz
Maximum Recom. Frequency	200 Hz
Recom. enclosure vol.	12 / 60 l 0.7 / 2.24 ft. <sup>3</sup>
Voice coil diameter	100 mm. 4 in.
Magnetic assembly weight	4.62 kg. 10.16 lb.
BL factor	25.3 N / A
Moving mass	0.118 kg.
Voice coil length	25 mm
Air gap height	14 mm
X damage (peak to peak)	60 mm

# **DIMENSION DRAWINGS**



## THIELE-SMALL PARAMETERS\*\*

Resonant frequency, fs	45 Hz
D.C. Voice coil resistance, Re	4.9 ohms
Mechanical Quality Factor, Qms	12.07
Electrical Quality Factor, Qes	0.27
<b>Total Quality Factor, Qts</b>	0.26
Equivalent Air Volume to Cms, Vas	451
Mechanical Compliance, Cms	105.5 <b>μ</b> m / N
Mechanical Resistance, Rms	2.77 kg/s
Efficiency, ηο (%)	1.47
Effective Surface Area, Sd (m²)	$0.055  \text{m}^2$
Maximum Displacement, Xmax***	10 mm
Displacement Volume, Vd	550 cm <sup>3</sup>
Voice Coil Inductance, Le @ 1 kHz	3.25 mH

# **MOUNTING INFORMATION**

Overall diameter Bolt circle diameter Baffle cutout diameter:	312 mm. 298 mm.	
- Front mount	283 mm.	11.14 in.
- Rear mount	280 mm.	11.02 in.
Depth	132 mm.	5.20 in.
Volume displaced by driver	4 l.	0.14 ft. <sup>3</sup>
Net weight	7.2 kg.	15.84 lb.
Shipping weight	8 kg.	17.6 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).

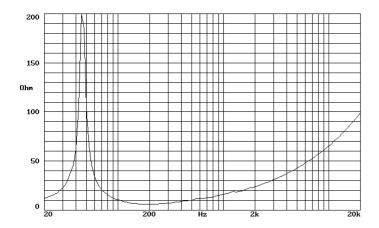
\*\*\*The Xmax is calculated as (Lvc - Hag)/2 + Hag/3.5, where Lvc is the voice coil length and Hag is the air gap height.



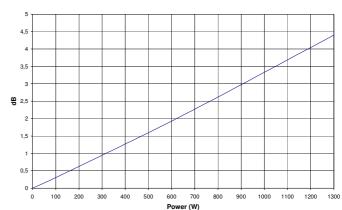
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## FREE AIR IMPEDANCE CURVE

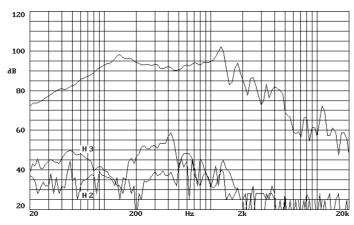


## **POWER COMPRESSION LOSSES**



Note: Power Compression Losses were calculated after 5 minutes period applying a pink noise signal filtered between 25 and 200 Hz.

## FREQUENCY RESPONSE AND DISTORTION



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

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