NSD4015N

HF Neodymium Driver - Nitrogen Coated Diaphragm

KeyFeatures

- 111 dB 1W / 1m average sensitivity
- 1,5 inch exit throat
- 4 inch edgewound aluminium voice coil
- 320W max. program power rating
- True Piston Motion TiN coated titanium diaphragm
- Copper ring reduces inductance modulation distortion and increases high frequency output
- Ultra high precision diaphragm centering system for improved performances and lifespan
- BEM optimized 4-slot metal alloy phase-plug
- Available also in 1.4" and 2" exit versions

Description

NSD4015N is a 1.5 inch exit, 4" voice coil neodymium compression driver has been designed for extremely high quality sound systems application. The titanium nitride coated dome - so called TPM True Piston Motion technology - dramatically improves stiffness with obvious benefits in transient and intermodulation distortion response. With its very high value of elasticity modulus (six times higher than standard titanium), the ultra-thin nitride coated film applied both sides of the dome doubles the treated dome stiffness. The piston frequency range motion extends then by 25% when compared to regular titanium diaphragm, showing a predictable, ideal frequency response decay and avoiding top-end spurious resonances. This results in a more natural sound character up to the top end part of the spectrum. The nitride-free ellipsoidal suspension shape has been designed to maintain constant titanium stiffness, assuring a 3rd harmonic distortion lower than 0.05% over the whole working frequency range. The NSD4015N extremely powerful neodymium magnet assembly has been designed to obtain 22 KGauss in the gap for major benefits in transient response. The motor structure, throughout the precisely coherent phase plug with 4 circumferential slots and copper ring on the pole piece, reduces inductance effect and distortion. Four top plate air ducts have been designed to act as a loading chamber for the diaphragm, implementing mid band distortion and response figures. The custom designed O-ring creates a tight seal between the plate and the cover assuring air chamber loading. Excellent heat dissipation and thermal exchange are guaranteed by the direct contact between the magnetic structure and the aluminum cover which gives a lower power compression value. A special epoxy coating is applied to the ring magnet and the top and back plates of the magnetic structure making the driver more resistant to the corrosive effects of salts and oxidization.

Models

Model	Code	Information
0424N8N000	0424N8N000	8 Ohm

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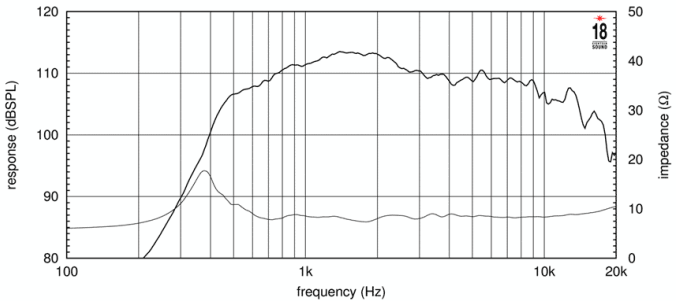
General Specifications

Throat Diameter	39 mm (1,5 in)
Rated Impedance	8 Ohm
DC Resistance	6,0 Ohm
Minimum Impedance	9,2 Ohm
Le (at 1kHz)	N/A
Sensitivity	111 dB
Frequency Range	800 Hz ÷ 20 kHz
Diaphragm Material	Nitride Coated Titanium
Voice Coil Diameter	100 mm (4 in)
Voice Coil Winding Material	Edge-wound aluminum
Magnet Material	Neodymium
Flux Density	2 T
BL Factor	17 Tm
Polarity	Positive voltage on red terminal gives positive pressure in the throat

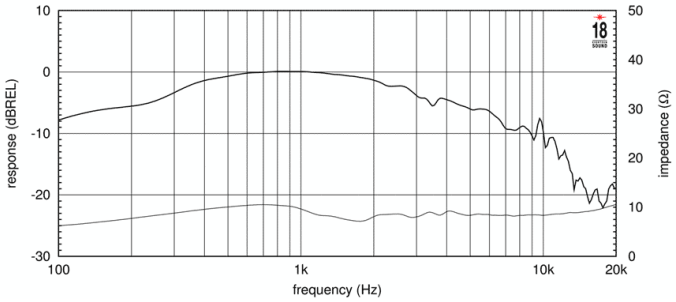
Thiele Small Parameters

Mounting information

Overall diameter	150 mm (6 in)
N. of mounting holes and bolt	4 M6 holes 90° at Ø102 mm (4 in)
Bolt circle diameter	102 - 114,7 mm(4 - 4.52 in)
Total depth	57 mm (2,2 in)
Net weight	3.2 Kg (7 lb)
Shipping weight	3.6 Kg (8.1 lb)
CardBoard Packaging dimensions	170 x 170 x 80 mm (6,69 x 6,69 x 3,15 in)



FREQUENCY RESPONSE MEASURED WITH 2.83 V INPUT AT 1 METER DISTANCE ON CENTRAL FORWARD AXIS FROM THE MOUTH OF XR1564 HORN. THIN LINE REPRESENTS IMPEDANCE MEASURED IN SAME CONDITIONS.



FREQUENCY RESPONSE MEASURED WITH 77,5 mV INPUT ON CENTRAL FORWARD AXIS IN A PLANE WAVE TUBE. THIN LINE REPRESENTS IMPEDANCE MEASURED IN SAME CONDITIONS.

Notes

1) Sensitivity represent the averaged value of acoustic output as measured on the central forward axis of a 1.5" horn, at a distance 1 m from horn mouth, when connected to 2,83 V sine wave swept between 1000-4000 Hz

2) Minimum Crossover frequency requires at least 12 dB oct slope high pass filter