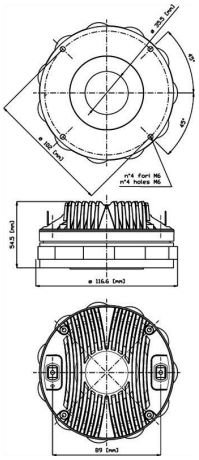
NSD1424BTN 8Ω

HF Drivers - 1.4 Inches



- 110 dB 1W / 1m average sensitivity
- 140 W program power handling
- 1,4 inches exit throat
- 64mm (2,4 in) edgewound aluminum voice coil
- True Piston Motion TiN coated titanium diaphragm
- Proprietary phase plug design
- High grade neodymium magnetic structure
- Excellent thermal exchange

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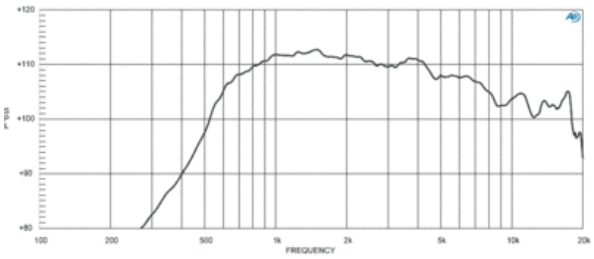
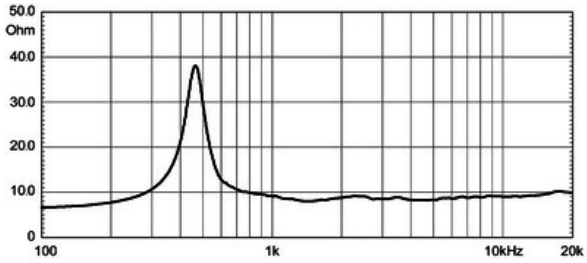
The NSD1424BTN 1.4" exit neodymium high frequency compression driver has been designed for high level sound systems application. This new HF unit uses our proprietary True Piston Motion - TPM - technology, based on a thin film nitride coating deposit over the titanium diaphragm. The thin film is just several micron thick and is realized in a PVD - Physical Vapour Deposition - vacuum chamber. With its very high value of elasticity modulus (six times higher than titanium and two times higher than beryllium), the Tin coated Titanium diaphragm is capable of doubling the diaphragm overall stiffness with obvious benefits in terms of impulse response and intermodulation distortion reduction. The frequency response is then extended by 25%, showing a predictable, ideal pistonic behaviour, avoiding top-end spurious resonances. A proprietary treated Nomex bended former edge-wound aluminum 60mm voice coil completes diaphragm assembly. It has been made joining the proprietary treated Nomex former directly to the titanium dome through its upper bend edge. In comparison with usual straight former joint, the driver design assures extended frequency energy transfer for improved response linearity and unparallel reliability. This feature allows to keep proper motion control of the dome in real working conditions. Thanks to its physical properties, the proprietary treated Nomex former shows 30% higher value of tensile elongation at working operative temperature (200°C) when compared to Kapton. Moreover, this material is suitable to work also in higher moisture contents environments. Equipped with Proprietary Phase Plug 3P architecture, the NSD1424BTN has been designed to give smooth coherent wavefront in the horn entrance in all working frequency range and high level manufacturing consistency. The phase plug with its short openings and high flare rate value assures low distortion and remarkable improvements in mid-high frequency reproduction. Through careful use of elementary pieces of neodymium magnets, Eighteen Sound engineers have developed a powerful neodymium magnet assembly able to reach 19K Gauss in the gap in compact and lightweight structure. The motor structure, throughout the precisely coherent phase plug with 3 circumferential slots and copper ring on the pole piece, reduces inductance effects and distortion. 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 that allows to obtain a lower power compression value.





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SPECIFICATIONS[1]

Throat Diameter	35 mm (1.4 in)
Nominal Impedance	8 Ω
Minimum Impedance	8.0 Ω
Nominal Power Handling[2]	70 W
Continuous Power Handling[3]	140 W
Sensitivity[4]	110.0 dB
Frequency Range	0.8 - 20.0 kHz
Recommended Crossover[5]	1.2 kHz
Voice Coil Diameter	61 mm (2.4 in)
Winding Material	Aluminum
Diaphragm Material	Nitride coated Titanium
Flux Density	1.9 T
Magnet Material	Neodymium

MOUNTING AND SHIPPING INFO

Overall Diameter	116 mm (4.57 in)
Depth	54 mm (2.13 in)
Net Weight	1.7 kg (3.75 lb)
Shipping Weight	1.9 kg (4.19 lb)
Shipping Box	132x132x68 mm (5.20x5.20x2.68 in)

1. Driver mounted on Eighteen Sound XR1464C horn
2. 2 hour test made with continuous pink noise signal within the range from the recommended crossover frequency to 20 kHz. Power calculated on rated nominal impedance.
3. Power on Continuous Program is defined as 3 dB greater than the Nominal rating.
4. Applied RMS Voltage is set to 2.83 V for 8 ohms Nominal Impedance.
5. 12 dB/oct. or higher slope high-pass filter.