ND1090 16Ω

HF Drivers - 1.0 Inches

- 1 inch exit throat
- 109 dB 1W / 1m average sensitivity
- 80 Watt program power handling
- 44 mm (1 3/4 inch) edgewound aluminum voice coil
- PEN-Titanium diaphragm for extended frequency response
- Proprietary phase plug design
- Neodymium ring magnet for excellent transient response
- Excellent thermal exchange

The ND1090 1 inch exit neodymium high frequency compression driver has been designed for situations where the highest quality is required. Equipped with unique Phase Plug architecture, the ND1090 has been designed to give high level manufacturing consistency and a smooth coherent wavefront at the horn entrance across the whole working frequency range. The phase plug short openings and high flare rate value assure low distortion, showing remarkable improvements in mid-high frequency reproduction. The ND1090 diaphragm assembly is composed of a titanium dome sandwiched to a proprietary treated polyester suspension. This design maintains low resonance and lowers the minimum crossover point value to 1.6kHz. An edge-wound aluminum voice coil, wound on proprietary treated Nomex, completes the diaphragm assembly. Nomex shows a 30% higher value of tensile elongation at a working operative temperature (200°C) when compared to Kapton. Moreover, this proprietary former material is also suitable for use in high moisture content environments. The powerful neodymium magnet assembly has been designed to obtain 20 KGauss in the gap giving major benefits in transient response. A copper ring on the pole piece reduces inductance above 10 kHz, improving phase and impedance linearization. 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 leads to a lower power compression value. The ability to perform properly under inclement weather conditions is a key feature of the Eighteen Sound philosophy. Hence, in addition, a special treatment has been applied to the magnet and the top and back plates of the magnetic structure making the ND1090 driver more resistant to the corrosive effects of salts and oxidization. This treatment is more effective than any other treatment used by other manufacturers.

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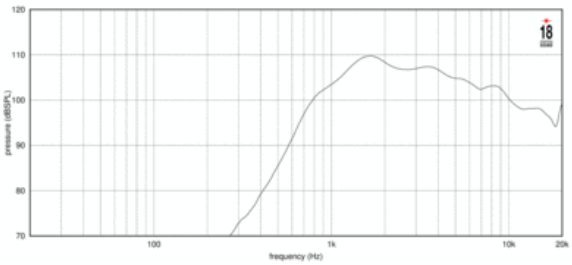

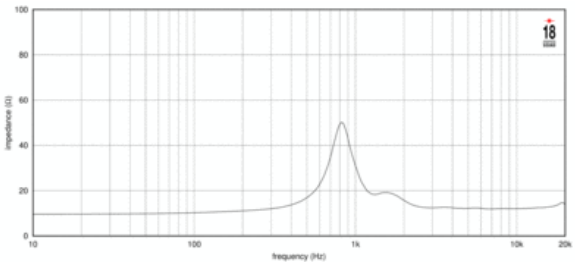

SPECIFICATIONS[1]

Throat Diameter	25 mm (1.0 in)
Nominal Impedance	16 Ω
Minimum Impedance	11.9 Ω
Nominal Power Handling[2]	50 W
Continuous Power Handling[3]	100 W
Sensitivity[4]	110.0 dB
Frequency Range	1.6 - 20.0 kHz
Recommended Crossover[5]	1.6 kHz
Voice Coil Diameter	44 mm (1.75 in)
Diaphragm Material	Titanium - Pen
Flux Density	2.0 T

MOUNTING AND SHIPPING INFO

Overall Diameter	93 mm (3.66 in)
Depth	53 mm (2.09 in)
Net Weight	1.1 kg (2.43 lb)
Shipping Weight	1.2 kg (2.65 lb)
Shipping Box	97x97x58 mm (3.82x3.82x2.28 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.

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