

# ND1020

## Neo High Frequency Driver

### Key Features

108,5 dB SPL 1W / 1m average sensitivity

1 inch exit throat

34,4 mm (1 1/3 inch) voice coil diameter

Polyethylene Diaphragm

60W Program Power Handling

Compact Lightweight Neodymium Structure

Proprietary Phase Plug design



### General Description

The ND1020 1-inch exit high frequency compression driver has been designed for use in situations where the highest possible sound quality is required.

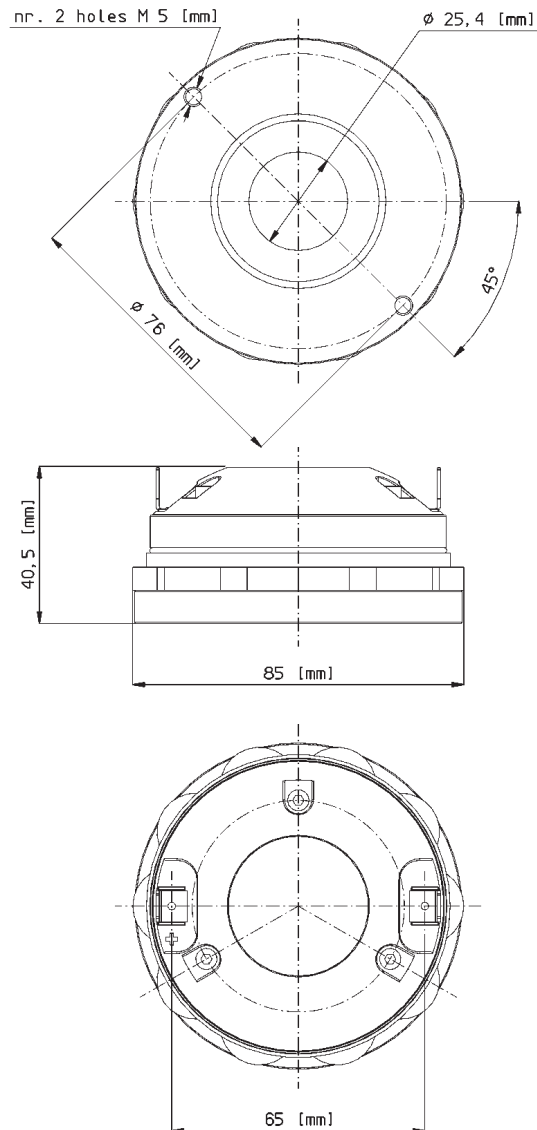
Polyethylene Naphthalate (PEN) has been used for the diaphragm assembly, giving to ND1020 a superior diaphragm dimensional stability compared to conventional Mylar film (160°C as a thermal rating compared to 105°C for PET) and maintaining a constant performance during its whole working life. PEN film, with its very high value of elasticity modulus (6000MPa compared to 4000MPa for PET and 2800MPa for polyimide film), is capable of a superior transient and intermodulation distortion response. The flat punched suspension shape has been designed to maintain low stiffness for superior low mid band distortion and response.

An edge-wound copper clad aluminum voice coil wound on treated Nomex completes the diaphragm assembly. Nomex shows a 20% higher value of tensile elongation at 200°C than the value at room temperature, (in comparison, Kapton tensile elongation is 30% lower at 200°C than the value at room temperature). Hence, Nomex is capable of keeping energy transfer from the voice coil to the dome under control, especially when the voice coil reaches high temperatures. As a plus, treated Nomex former voice coil can work well even in high moisture content environments, thanks to its very low porosity.

The ND1020 is equipped with unique Phase Plug architecture, designed to give smooth coherent wave front at the horn entrance over the whole working frequency range, as well as high level manufacturing consistency. The phase plug design shows short openings and high flare rate value, assuring low distortion and demonstrates remarkable improvements in mid-high frequency reproduction.

By carefully using elementary pieces of neodymium magnets, Eighteen Sound engineers have developed a powerful neodymium magnet assembly capable of reaching 18KGauss in the gap within a compact and lightweight structure.

0421P8M800 80hm  
0421P6M800 16 Ohm  
0421P4M800 4 Ohm



NEODYMIUM HF DRIVERS

**ND1020**

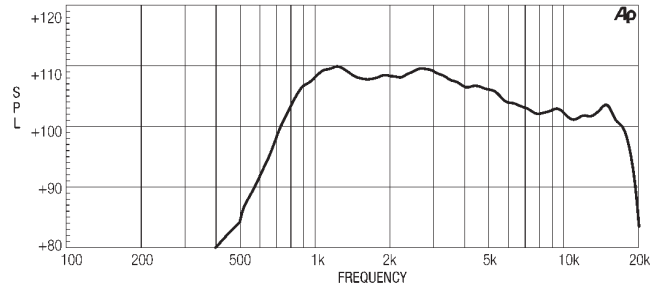
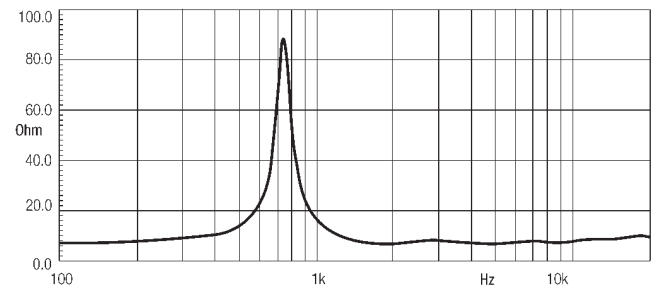
Neo High Frequency Driver

**GENERAL SPECIFICATIONS**

THROAT DIAMETER	25,4 mm (1 in)
RATED IMPEDANCE	8 ohm
DC RESISTANCE	5,8 Ohm
MINIMUM IMPEDANCE	6,5 Ohm at 5000Hz
LE (AT 1KHZ)	54 µH
AES POWER (1)	30 W above 2 kHz
PROGRAM POWER (2)	60 W above 2 kHz
SENSITIVITY(1W@1M) (3)	108,5 dB
FREQUENCY RANGE	1600Hz ÷ 20kHz
RECOMM. XOVER FREQUENCY	1600 Hz 12dB/oct slope
DIAPHRAGM MATERIAL	Treated polyethylene
VOICE COIL DIAMETER	34,4 mm (1 1/3 in)
VOICE COIL WINDING MATERIAL	Edge-wound aluminum
MAGNET MATERIAL	Neodymium
FLUX DENSITY	1,8 T
BL FACTOR	6 N/A
POLARITY	Positive voltage on red terminal gives positive pressure in the throat

**MOUNTING INFORMATION**

Overall diameter	85 mm (3,3 in)
Mounting holes diameter	2 M5 holes on Ø 76 mm (3 in)
Bolt circle diameter	58 mm (2,3 in)
Total depth	40,5 mm (1,6 in)
Net weight	1,1 Kg (2,4 lb)
Shipping weight	1,2 Kg (2,6 lb)
CardBoard Packaging dimensions	97x97x58 mm (3,8x3,8x2,3 in)

**ND1020 MEASURED WITH 1W INPUT ON RATED IMPEDANCE AT 1M DISTANCE ON XT1086 HORN MOUTH AXIS****FREE AIR IMPEDANCE MAGNITUDE CURVE****NOTES**

- (1) AES power rating is tested with a pink noise input having a 6 dB crest factor for two hours duration within the specified range. Power calculated on minimum impedance.
- (2) Program power rating is defined as 3 dB greater than AES rating, and is a conservative expression of the transducer ability to handle music program material.
- (3) Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of XT1086 horn, averaged between 1kHz and 4 kHz.

Eighteen Sound engages in research and product improvement. New materials and design refinements can be introduced into existing products without notice.