

ND1085

HF Neodymium Driver

KeyFeatures

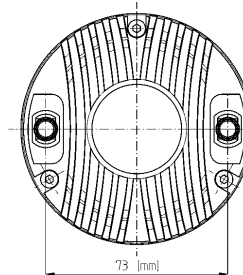
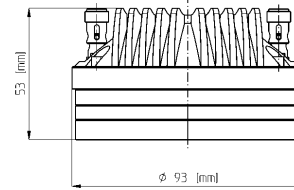
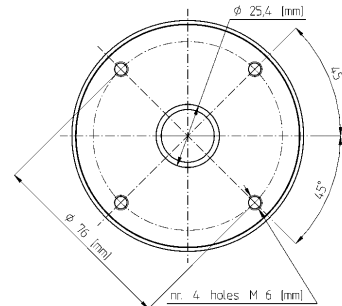
- 1 inch exit throat
- 109 dB 1W / 1m average sensitivity
- 80 Watt program power handling
- 44 mm (1 3/4 inch) edgewound aluminum voice coil
- PEN diaphragm for extended frequency response
- Proprietary phase plug design
- Neodymium ring magnet for excellent transient response
- Excellent thermal exchange

Description

The ND1085 1 inch exit neodymium high frequency compression driver has been designed for situations where the highest quality is required. Equipped with proprietary Phase Plug architecture, the ND1085 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 diaphragm is made with a proprietary treated Polyethylene material (PEN). Thanks to its superior dimensional stability up to 160°C, PEN is able to maintain constant behavior during its whole working life. Moreover, thanks to its high value of elasticity modulus (50% higher than Mylar and 100% higher than polyimide), it is capable of superior transient and intermodulation distortion response. The flat suspension shape has been designed to maintain low stiffness and low mid band distortion and response. The edge-wound aluminum voice coil, wound on custom 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 treated 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 ND1085 driver more resistant to the corrosive effects of salts and oxidation.

Models

Model	Code	Info
0421P8N400	0421P8N400	8 Ohm



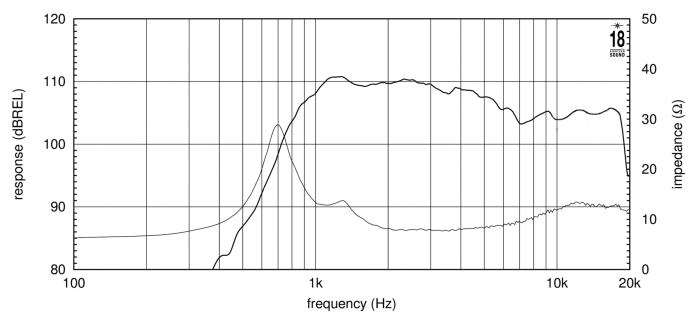
Mounting information

Overall diameter	92 mm (3,6 in)
N. of mounting holes and bolt	4 M6 holes 90° at Ø 76 mm (3 in)
Bolt circle diameter	76 mm (3 in)
Total depth	53 mm (2,1 in)
Net weight	1,1 Kg (2,4 lb)
Shipping weight	1,3 Kg (2,9 lb)
Packaging Dimensions	1,3 Kg (2,9 lb)

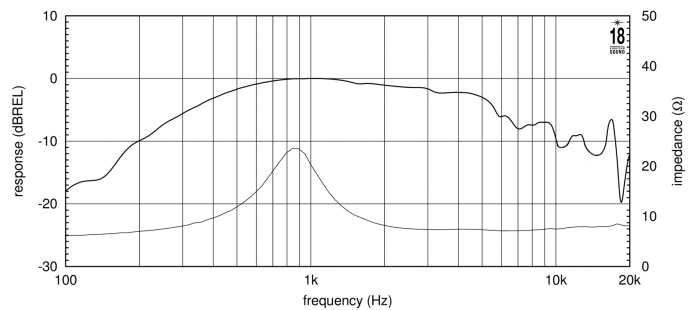
General Specifications HF

Throat Diameter	25,4 mm (1 in)
Rated Impedance	8 Ohm
D.C. Resistance	5,2 Ohm
Minimum Impedance	7,8 Ohm at 4000Hz
Le (1kHz)	66 µH
AES Power	40 W above 1,6 kHz
Program power (8)	80 W above 1,6 kHz
Sensitivity (9)	109 dB
Frequency Range	1600Hz - 20kHz
Recomm. Xover Frequency	1600Hz (12dB/oct slope)
Diaphragm material	Titanium - PEN
Voice Coil Diameter	44,4 mm (1 3/4 inch)
Voice Coil winding material	Edge-wound aluminum
Magnet material	Neodymium
Flux Density	2 T
BI Factor	9,1 N/A
Polarity	Positive voltage on "+" terminal gives positive pressure in the throat

FREQUENCY RESPONSE AND IMPEDANCE MAGNITUDE CURVE



ND1085 FREQUENCY RESPONSE MEASURED WITH 1W INPUT ON RATED IMPEDANCE AT 1M DISTANCE ON CENTRAL FORWARD AXIS FROM THE MOUTH OF REFERENCE HORN. THIN LINE REPRESENTS IMPEDANCE MEASURED IN SAME CONDITIONS. FREQUENCY RESPONSE CURVE AND IMPEDANCE MAGNITUDE CURVE ON A PLAIN WAVE TUBE



ND1085 FREQUENCY RESPONSE MEASURED WITH 1W INPUT ON RATED IMPEDANCE ON CENTRAL FORWARD AXIS IN A REFLECTION FREE ENVIRONMENT. THIN LINE REPRESENTS IMPEDANCE MEASURED IN SAME CONDITIONS

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 1 kHz and 4 kHz.