

12ND610

Very High Output Midbass Neodymium Transducer

Key Features

- 102 dB SPL 1W / 1m average sensitivity
- 75 mm (3 in) Interleaved Sandwich Voice coil (ISV)
- 450 W continuous pink noise power handling
- Neodymium magnet assembly
- Extremely high sound quality
- Very shallow profile, 120 mm (4,7 in)
- Ideal for mid and mid-bass high loading systems
- Water resistant cone



General Description

The 12ND610 is an extremely high output neodymium mid-bass transducer perfect for high quality professional systems.

It has been designed for use in horn-loaded, as well as bass-reflex compact enclosures. Its cone is capable of carrying significant loadings thanks to a dedicated reinforcing treatment.

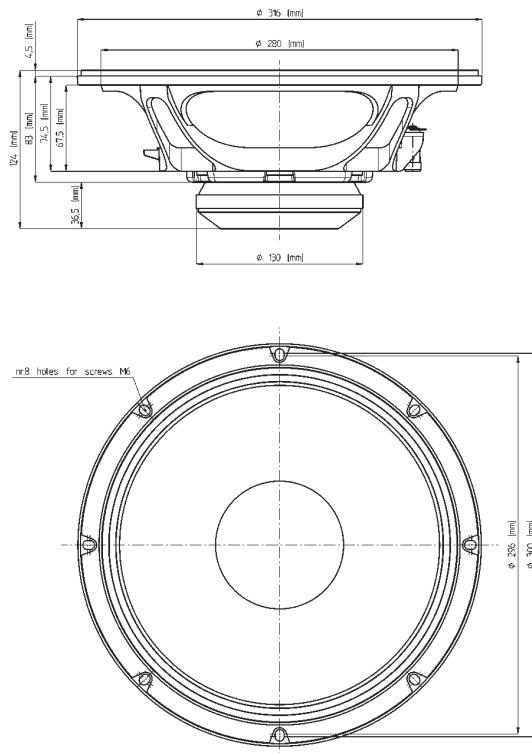
The extremely powerful external neodymium magnet assembly assures high flux concentration, low power compression and excellent heat exchange. The levels of force factor and power handling result in the best power to weight ratio on the market today..

The curvilinear paper cone has been designed by Eighteen Sound engineers with a special high-strength wood pulp to achieve the best possible linearity within its intended frequency range and to control bell-mode resonances around the cone circumference. The cone is carried by a multiroll suspension built from a linen-like material, which is more resistant to aging and fatigue than traditional materials. The basket, heat sink and cone singular treatments make the 12ND610 suitable for use in high humidity environments.

The 75 mm state-of-the-art voice coil is similar to the one fitted to our top-of-the-range 18" and 15" models but it is wound with aluminum wire. It employs our Interleaved Sandwich Voice coil (ISV) technology in which a high strength fiberglass former carries windings on both the outer and inner surfaces to achieve a mass balanced coil. The final result is an extremely linear motor assembly with a reduced tendency for eccentric behavior when driven hard.

A proprietary humidity-block cone treatment makes the transducer suitable for outdoor use in adverse weather conditions. In addition, a special coating applied to both the top and back plates makes the 12ND610 far more resistant to the corrosive effects of salts and oxidization.

022126N230 16 Ohm
022128N230 8 Ohm



NEODYMIUM LF-MB-MF TRANSDUCERS

12ND610

Very High Output Midbass Neodymium Transducer

GENERAL SPECIFICATIONS

NOMINAL DIAMETER	300mm (12 in)
RATED IMPEDANCE	8 Ohm
CONTINUOUS PINK NOISE (1)	450W
CONTINUOUS POWER (2)	350W
PROGRAM POWER (3)	700W
PEAK POWER (4)	1500W
SENSITIVITY (5)	102dB
FREQUENCY RANGE (6)	80 - 5500 Hz
POWER COMPRESSION @-10DB (7)	(35 W) 0,7 dB
POWER COMPRESSION @-3DB	(175 W) 1,9 dB
POWER COMPRESSION @FULL POWER	(350 W) 2,4 dB
MAX RECOMM. FREQUENCY	2000 Hz
RECOMM. ENCLOSURE VOLUME	8 ÷ 40 lt. (0,28 ÷ 1,41 cuft)
MINIMUM IMPEDANCE	4,2 Ohm at 25°C
MAX PEAK TO PEAK EXCURSION	23 mm (0,91 in)
VOICE COIL DIAMETER	75 mm (3 in)
VOICE COIL WINDING MATERIAL	aluminum
POLARITY	positive voltage on red terminal gives forward cone motion

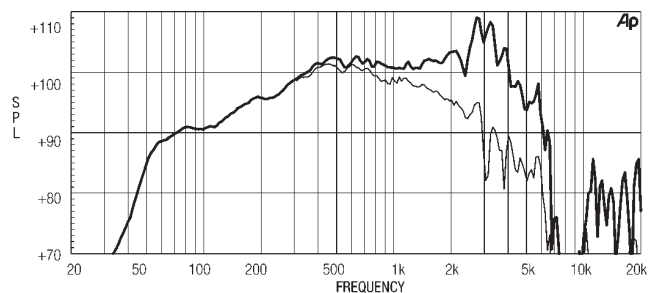
THIELE SMALL PARAMETERS (8)

Fs	46 Hz
Re	5,9 Ohm
Sd	0,0531 sq.mt. (82,31 sq.in.)
Qms	4,3
Qes	0,15
Qts	0,14
Vas	94,4 lt. (3,32 cuft)
Mms	49 gr. (0,11 lb)
BL	24 Tm
Linear Mathematical Xmax (9)	± 3,5 mm (± 0,14 in)
Le (1kHz)	1,17 mH
Ref. Efficiency 1W@1m (half space)	100 dB

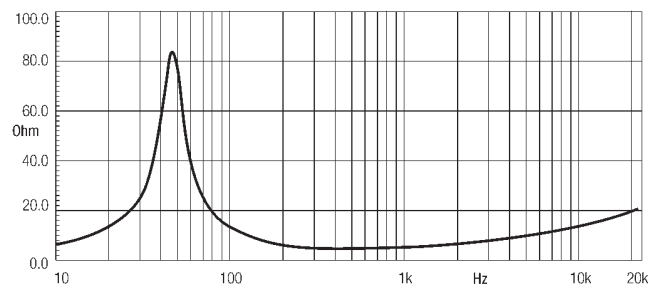
MOUNTING INFORMATION

Overall diameter	315 mm (12,4 in)
N. of mounting holes	8
Mounting holes diameter	7,15 mm (0,28 in)
Bolt circle diameter	296-300 mm (11,65-11,8 in)
Front mount baffle cutout ø	282 mm (11,1 in)
Rear mount baffle cutout ø	282 mm (11,1 in)
Total depth	124 mm (4,88 in)
Flange and gasket thickness	11,5 mm (0,45 in)
Net weight	3,4 kg (7,51 lb)
Shipping weight	4,2 kg (9,27 lb)
CardBoard Packaging dimensions	332 x 332 x 184 mm(13,07 x 13,07 x 7,24 in)

FREQUENCY RESPONSE CURVE OF 12ND610 MADE ON 50 LIT. ENCLOSURE TUNED 60HZ INFREE FIELD (4PI) ENVIRONMENT. ENCLOSURE CLOSES THE REAR OF THE DRIVER. THE THIN LINE REPRESENTS 45 DEG. OFF AXIS FREQUENCY RESPONSE



FREE AIR IMPEDANCE MAGNITUDE CURVE



NOTES

- (1) AES standard
- (2) Continuous power rating is measured in 50 lit enclosure tuned 60Hz using a 60 -2000Hz band limited pink noise test signal applied continuously for 2 hours.
- (3) Program power rating is measured as for 2 above but 50% duty cycle.
- (4) The peak power rating is based on a 6dB crest factor above the continuous power rating and represents the maximum permitted instantaneous peak power level over a maximum period of 10ms which will be withstood by the loudspeaker without damage.
- (5) Sensitivity represents the averaged value of acoustic output as measured on the forward central axis of cone, at distance 1m from the baffle panel, when connected to 2,83V sine wave test signal swept between 500Hz and 2500Hz with the test specimen mounted in the same enclosure as given for 2 above.
- (6) Frequency range is given as the band of frequencies delineated by the lower and upper limits where the output level drops by 10 dB below the rated sensitivity in half space environment.
- (7) Power compression represents the loss of sensitivity for the specified power, measured from 50-500 Hz, after a 5 min pink noise preconditioning test at the specified power.
- (8) Thiele - Small parameters are measured after the test specimen has been conditioned by 450 W AES power and represent the expected long term parameters after a short period of use.
- (9) Linear Mat. Xmax is calculated as; $(Hvc-Hg)/2 + Hg/4$ where Hvc is the coil depth and Hg is the gap depth.

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