

12ND610

Very High Output MB Neodymium Driver

Key Features

- 102 dB SPL 1W / 1m average sensitivity
- 75 mm (3 in) Interleaved Sandwich Voice coil (ISV)
- 450 W AES power handling
- Neodymium magnet assembly
- Very shallow profile, 124 mm (4,9 in)
- Water resistant cone
- Suitable for midrange and mid-bass loaded applications



General Description

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

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

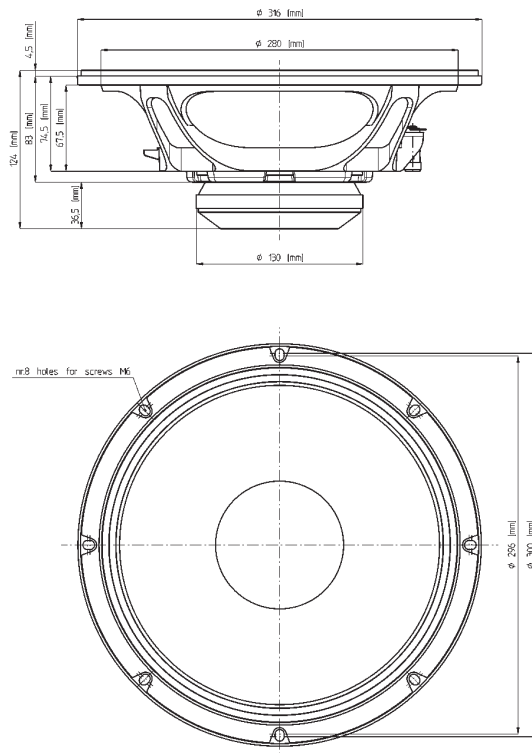
The transducer's extremely powerful neodymium magnet assembly assures high flux concentration, low power compression and excellent heat exchange. The levels of force factor and power handling result in the best power to weight ratio on the market today.

12ND610 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 75 mm (3 in) state-of-the-art inside outside voice coil is similar to the one fitted to our top-of-the-range 18" and 15" models but it's 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

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GENERAL SPECIFICATIONS

NOMINAL DIAMETER	300mm (12 in)
RATED IMPEDANCE	8 Ohm
AES POWER (1)	450W
PROGRAM POWER (2)	700W
PEAK POWER (3)	1500W
SENSITIVITY (4)	102dB
FREQUENCY RANGE (5)	80 - 5500 Hz
POWER COMPRESSION @-10DB (6)	0,7 dB
POWER COMPRESSION @-3DB	1,9 dB
POWER COMPRESSION @FULL POWER	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
SUSPENSION	Triple roll, polycotton
CONE	Curvilinear, Paper

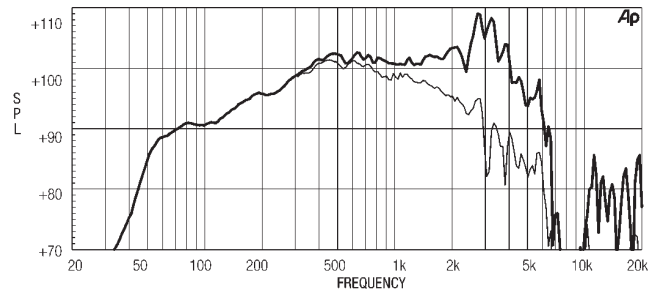
THIELE SMALL PARAMETERS (7)

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 (8)	± 3,5 mm (± 0,14 in)
Le (1kHz)	1,17 mH
Ref. Efficiency 1W@1m (half space)	100 dB

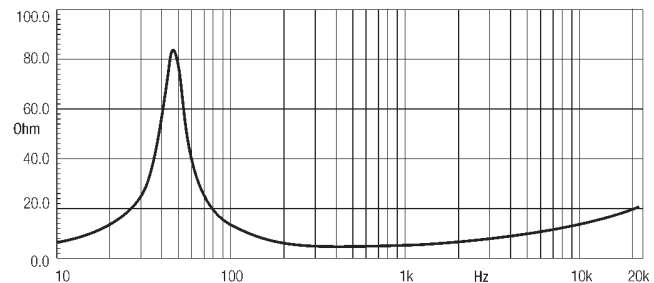
MOUNTING INFORMATION

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 IN FREE 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 power is determined according to AES2-1984 (r2003) standard
- (2) Program power rating is measured in 50 lit enclosure tuned @ 60Hz, using 60 -2000Hz band limited pink noise test signal with 50% duty cycle, applied for 2 hours.
- (3) The peak power rating represents the maximum permitted instantaneous peak power level over a maximum period of 10ms which will be withstood by the loudspeaker without damage.
- (4) 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 (1) above.
- (5) 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.
- (6) 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.
- (7) 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.
- (8) Linear Math. 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.