

8NM610

Very High Output Midrange Neo Transducer

Key Features

- 104 dB SPL 1W / 1m average sensitivity (free air)
- 75 mm (3 in) Interleaved Sandwich Voice coil (ISV)
- 400 W AES power handling
- High force neodymium motor assembly
- Copper ring to linearize impedance curve
- Extremely low distortion design
- Sealed basket design
- Humidity resistant cone
- Ideal for high quality, very high SPL midrange applications



General Description

The 8NM610 is a 8 inch neodymium high output midrange frequency transducer designed around a cast aluminum sealed basket.

The design goal for this unit is to achieve an extremely high sound output and quality for direct and mainly horn loaded applications such as line array configurations. The back cavity volume has been optimized with attention to horn applications and also on the heat extraction because it is a true powerful heatsink for all the encapsulated magnet structure.

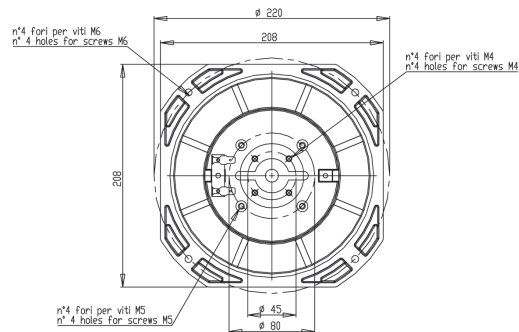
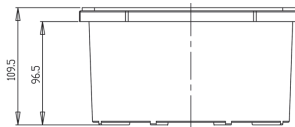
An oversized external configuration neodymium magnet, considerably more efficient than traditional under-pole magnet topology, have been used in order to provide high flux density and excellent distortion control. This is further guaranteed by a flux stabilizing ring with the function of minimizing the overall harmonic and intermodulation distortion figure.

The curvilinear cone, made with a high damping wood pulp, has been developed to achieve the best possible linearity within its frequency range.

The 75mm (3 in) aluminum inside outside voice coil employs our Interleaved Sandwich Voice coil (ISV) technology, in which a high strength fibreglas former carries windings on both the outer and inner surfaces to achieve a balanced coil with a uniform distribution of mass and motive energy. This results in an extremely linear motor assembly.

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 8NM610 far more resistant to the corrosive effects of salts and oxidization.

022088N610 80hm
022086N610 160hm



NEODYMIUM LF-MB-MF TRANSDUCERS

8NM610

Very High Output Midrange Neo Transducer

GENERAL SPECIFICATIONS

NOMINAL DIAMETER	200mm (8 in)
RATED IMPEDANCE	16 Ohm
AES POWER	400 W
PROGRAM POWER (1)	600 W
PEAK POWER (2)	1200 W
SENSITIVITY (3)	104/108,5 dB (free air / horn loaded)
FREQUENCY RANGE (4)	400 ÷ 5000 Hz
POWER COMPRESSION @-10DB (5)	0,6dB
POWER COMPRESSION @-3DB	1,6dB
POWER COMPRESSION @FULL POWER	2,2dB
MAX RECOMM. FREQUENCY	3000 Hz
RECOMM. ENCLOSURE VOLUME	- - -
MINIMUM IMPEDANCE	14,5Ohm at 25°C
MAX PEAK TO PEAK EXCURSION	9 mm (0,4 in)
VOICE COIL DIAMETER	75 mm (3 in)
VOICE COIL WINDING MATERIAL	aluminum
SUSPENSION	M-roll, Polycotton
CONE	Curvilinear, Paper

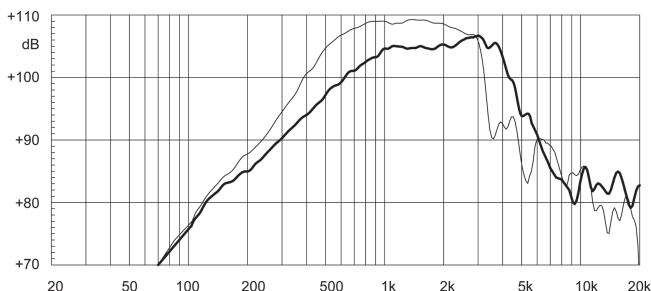
THIELE SMALL PARAMETERS (6)

Fs	259 Hz
Re	10 Ohm
Sd	0,022 sq.mt. (34,1 sq.in.)
Qms	1,20
Qes	0,28
Qts	0,23
Vas	1,6 lt. (0,1cuft)
Mms	17 gr. (0,04 lb)
BL	31 Tm
Linear Mathematical Xmax (7)	±3 mm (±0,12in)
Le (1kHz)	0,5 mH
Ref. Efficiency 1W@1m (half space)	102dB

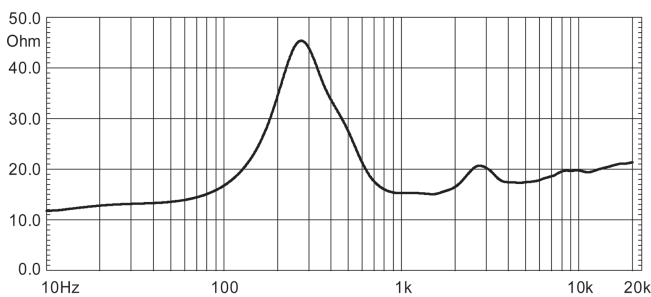
MOUNTING INFORMATIONS

Overall diameter	240 mm (9,4 in)
N. of mounting holes	4
Mounting holes diameter	6,5 mm (0,3 in)
Bolt circle diameter	220 mm (8,7 in)
Front mount baffle cutout ø	192 mm (7,6 in)
Rear mount baffle cutout ø	184 mm (7,2 in)
Total depth	113 mm (4,4 in)
Flange and gasket thickness	14 mm (0,6 in)
Net weight	3,9 kg (8,6 lb)
Shipping weight	4,3 kg (9,5 lb)
CardBoard Packaging dimensions	235 x 235 x 150 mm (9,25 x 9,25 x 5,91 in)

FREQUENCY RESPONSE CURVE OF 8NM610 IN FREE FIELD (4PI) ENVIRONMENT. THE THIN LINE REPRESENTS ON AXIS FREQUENCY RESPONSE LOADED ON A 80° X 60° HORN.



FREE AIR IMPEDANCE MAGNITUDE CURVE



NOTES

- (1) Program power rating is measured using a 500 -2000Hz band limited pink noise test signal with 50% duty cycle, applied for 2 hours.
- (2) 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.
- (3) 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 4V sine wave test signal swept between 500Hz and 2500Hz.
- (4) 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.
- (5) Power compression represents the loss of sensitivity for the specified power, measured from 100-1000 Hz, after a 5 min pink noise preconditioning test at the specified power.
- (6) Thiele - Small parameters are measured after the test specimen has been conditioned by 400W AES power and represent the expected long term parameters after a short period of use.
- (7) 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.