12ND610

Very High Output MB Neodymium Transducer

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

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.

Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Code</th>
<th>Information</th>
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<tbody>
<tr>
<td>022126N230</td>
<td>022126N230</td>
<td>16 Ohm</td>
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<tr>
<td>022128N230</td>
<td>022128N230</td>
<td>8 Ohm</td>
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</table>
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### General Specifications

- **Nominal Diameter**: 300mm (12 in)
- **Rated Impedance**: 8 Ohm
- **AES Power**: 450W
- **Program Power**: 700W
- **Peak Power**: 1500W
- **Sensitivity**: 102dB
- **Frequency Range**: 80 - 5500 Hz
- **Power Compression @-10dB**: 0.7 dB
- **Power Compression @-3dB**: 1.9 dB
- **Power Compression @Full Power**: 2.4 dB
- **Max Reccomm. Frequency**: 2000 Hz
- **Reccomm. 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

- **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**: ± 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 and bolt**: 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)

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### 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 60-2000 Hz 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) Linear Math. Xmax is calculated as (Hvc-Hg)/2 + Hg/4 where Hvc is the coil depth and Hg is the gap depth.