

12ND710

Very High Output MB Neodymium Driver

Key Features

- 101 dB SPL 1W / 1m average sensitivity
- 75 mm (3 in) Interleaved Sandwich Voice coil (ISV)
- 450 W AES power handling
- Neodymium magnet assembly
- Double Demodulating Rings (DDR) for lower distortion and reduced inductance
- Humidity resistant cone
- Suitable for midbass frequency reproduction



General Description

The 12ND710 has been specifically designed for use either as a midbass driver in compact 2-way reflex enclosures or as a direct radiating or horn loaded, dedicated midrange driver, in multi-way touring and fixed installation concert and arena systems.

The neodymium magnet assembly assures high flux concentration, low power compression and excellent heat exchange because the external magnet configuration is considerably more efficient than traditional under-pole magnet topology.

Consequently, high levels of force factor and power handling with an optimum power to weight ratio have been achieved.

Direct coupling of the special design basket and magnetic assembly with the large heat sink facilitates thermal flux through the ambient air, increasing the power handling capabilities and lowering the power compression.

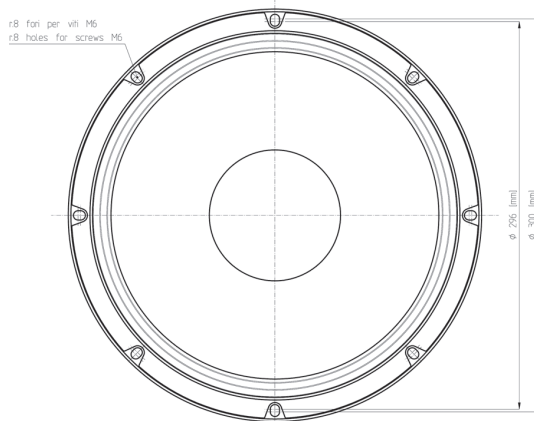
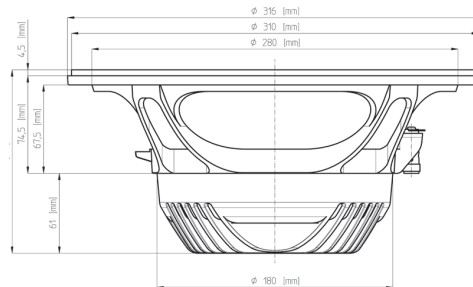
The curvilinear paper cone has been created with a special high strength wood pulp designed to achieve the best possible linearity within its intended frequency range and to control bell-mode resonances around the cone circumference. The cone is carried by a multiroll suspension formed from a linen-like material which is more resistant to aging and fatigue than traditional materials.

The already low distortion and sound quality are further improved by the use of Double Demodulating Rings technology (DDR) designed to dramatically reduce the intermodulation and harmonic distortion and improve the transient response.

The 12ND710 implements Interleaved Sandwich Voice coil technology (ISV), in which an aluminum coil is wound inside and outside a high strength fiberglass former, providing a better thermal and mechanical performance than conventional coils.

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 12ND710 far more resistant to the corrosive effects of salts and oxidization.

022126N710 16 Ohm
022128N710 8 Ohm



NEODYMIUM LF-MB-MF TRANSDUCERS

12ND710

Very High Output MB Neodymium Driver

GENERAL SPECIFICATIONS

| | |
|-------------------------------|-------------------------------|
| NOMINAL DIAMETER | 300 mm (11,8 in) |
| RATED IMPEDANCE | 8 Ohm |
| AES POWER | 450W |
| PROGRAM POWER (1) | 700W |
| PEAK POWER (2) | 1400W |
| SENSITIVITY (3) | 101 dB |
| FREQUENCY RANGE (4) | 60 ÷ 6000Hz |
| POWER COMPRESSION @-10DB (5) | 0,6 dB |
| POWER COMPRESSION @-3DB | 2 dB |
| POWER COMPRESSION @FULL POWER | 2,8 dB |
| MAX RECOMM. FREQUENCY | 2000 Hz |
| RECOMM.ENCLOSURE VOLUME | 10 ÷ 80 lt. (0,4 ÷ 2,83 cuft) |
| MINIMUM IMPEDANCE | 5,7 Ohm at 25°C |
| MAX PEAK TO PEAK EXCURSION | 22 mm (0,9 in) |
| VOICE COIL DIAMETER | 75 mm (3 in) |
| VOICE COIL WINDING MATERIAL | aluminum |
| SUSPENSION | M-roll, Polycotton |
| CONE | Curvilinear, Paper |

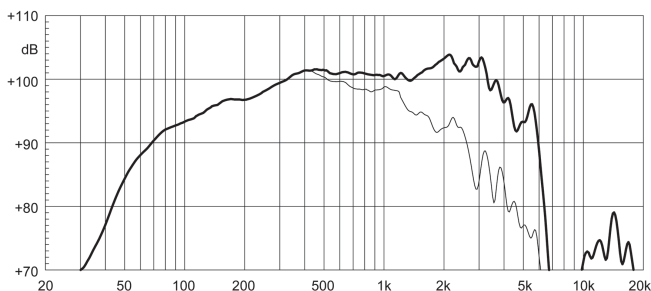
THIELE SMALL PARAMETERS (6)

| | |
|------------------------------------|----------------------------|
| Fs | 52 Hz |
| Re | 5 Ohm |
| Sd | 0,053 sq.mt. (82,2 sq.in.) |
| Qms | 6 |
| Qes | 0,2 |
| Qts | 0,2 |
| Vas | 92 lt. (3,2 cuft) |
| Mms | 40 gr. (88,3 lb) |
| BL | 18 Tm |
| Linear Mathematical Xmax (7) | ± 5 mm (± 0,20 in) |
| Le (1kHz) | 1 mH |
| Ref. Efficiency 1W@1m (half space) | 6% (100 dB) |

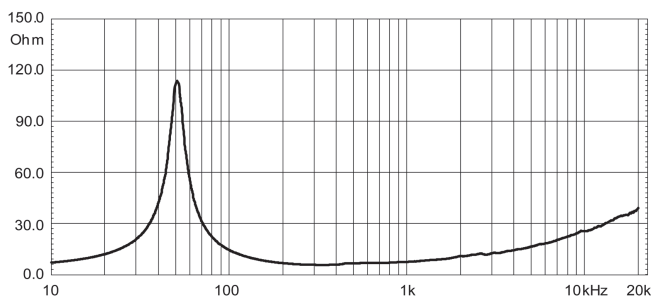
MOUNTING INFORMATION

| | |
|--------------------------------|---|
| Overall diameter | 315 mm (12,4 in) |
| N. of mounting holes | 8 |
| Mounting holes diameter | 7,15 mm (0,3 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 | 141mm (5,6 in) |
| Flange and gasket thickness | 11,5 mm (0,5 in) |
| Net weight | 4,7 kg (9,1 lb) |
| Shipping weight | 4,8 kg (10,4 lb) |
| CardBoard Packaging dimensions | 332 x 332 x 184 mm(13,07 x 13,07 x 7,24 in) |

FREQUENCY RESPONSE CURVE OF 12ND710 ON 50 LT ENCLOSURE TUNED AT 60HZ. THE ENCLOSURE CLOSES THE REAR OF THE DRIVER. THE THIN LINE REPRESENTS 45 DEG. OFF AXIS FREQUENCY RESPONSE.



FREE AIR IMPEDANCE MAGNITUDE CURVE



NOTES

- (1) Program power rating is measured in 50 lt enclosure tuned at 60Hz using a 40-400Hz 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 2,83 V sine wave test signal swept between 100Hz and 500Hz with the test specimen mounted in the same enclosure as given for (1) above.
- (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 50-500 Hz, after a 5 min pink noise preconditioning test at specified power.
- (6) 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.
- (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.