

12ND730

Extended Low Frequency Neo Transducer

Key Features

- 98 dB SPL 1W / 1m average sensitivity
- 75 mm (3 in) Interleaved Sandwich Voice coil (ISV)
- 600W program power handling
- High force neodymium magnet assembly
- Ideal for compact high loading enclosures



General Description

The 12ND730 transducer has been designed to meet market demand for high output woofers, capable of providing deep bottom-end in bandpass, horn or small reflex enclosures. The level of distortion is kept very low within its application range.

The 12ND730 is suitable for high loading enclosures, such as subwoofers or 2-way system reflex enclosures when coupled with a 1.4"-2" compression driver.

The neodymium magnet assembly developed by Eighteen Sound engineers assures high flux concentration, low power compression and excellent heat exchange since the external magnet configuration is considerably more efficient than traditional under-pole magnet topology. This results in high levels of force factor and power handling with an optimum power to weight ratio.

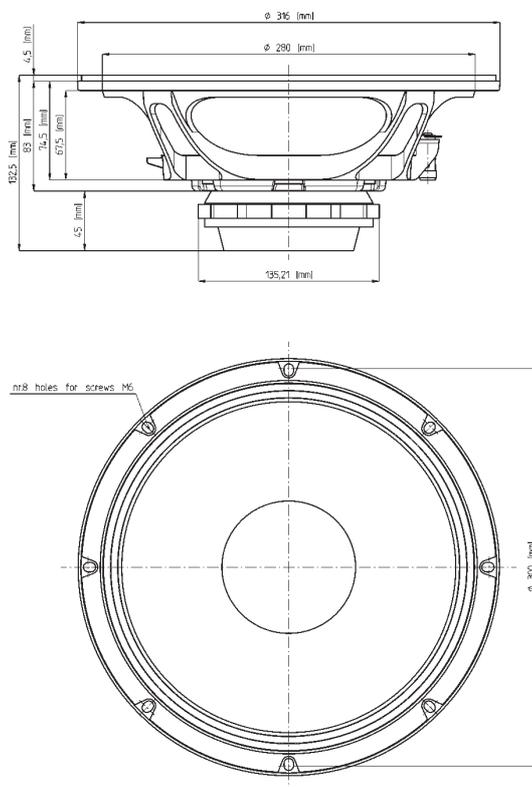
The deep profile curvilinear cone, made from a special high strength wood pulp has been designed to achieve the best possible linearity within its frequency range. The cone surround made from a linen-like material is highly resistant to aging and fatigue. The in-house developed cone treatment is fully water repellent and also gives a significant degree of rigidity to the cone.

The 75 mm Interleaved Sandwich Voice coil (ISV) assembly is wound on a strong fiberglass former that improves force transmission and thermal power handling.

The 4 threaded backplate holes give the user the possibility to insert an external-customised heat sink if further heat dissipation is required.

A special coating applied to both the top and back plates makes the 12ND730 far more resistant to the corrosive effects of salts and oxidization.

022128N230 8ohm



NEODYMIUM LF-MB-MF TRANSDUCERS

12ND730

Extended Low Frequency Neo Transducer

GENERAL SPECIFICATIONS

| | |
|-------------------------------|---------------------------------|
| NOMINAL DIAMETER | 300 mm (12 in) |
| RATED IMPEDANCE | 8 Ohm |
| AES POWER | 400W |
| PROGRAM POWER | 600W |
| PEAK POWER (1) | 1200W |
| SENSITIVITY (2) | 98dB |
| FREQUENCY RANGE (3) | 53 ÷ 5000 Hz |
| POWER COMPRESSION @-10DB (4) | 0,7 dB |
| POWER COMPRESSION @-3DB | 2,1 dB |
| POWER COMPRESSION @FULL POWER | 3,1 dB |
| MAX RECOMM. FREQUENCY | 1300 Hz |
| RECOMM. ENCLOSURE VOLUME | 40 ÷ 100 lt. (1,41 ÷ 3,53 cuft) |
| MINIMUM IMPEDANCE | 6,8 Ohm at 25°C |
| MAX PEAK TO PEAK EXCURSION | 30 mm (1,18 in) |
| VOICE COIL DIAMETER | 75 mm (2,95 in) |
| VOICE COIL WINDING MATERIAL | copper |
| SUSPENSION | Double roll, treated polycotton |
| CONE | Curvilinear, treated paper |

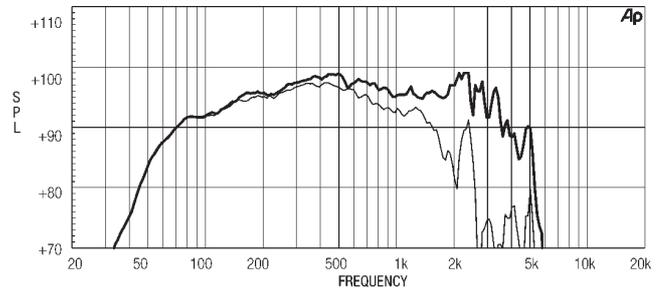
THIELE SMALL PARAMETERS (5)

| | |
|------------------------------------|------------------------------|
| Fs | 45 Hz |
| Re | 5,6 Ohm |
| Sd | 0,0531 sq.mt. (82,31 sq.in.) |
| Qms | 5,13 |
| Qes | 0,24 |
| Qts | 0,23 |
| Vas | 90 lt. (3,18 cuft) |
| Mms | 55 gr. (0,12 lb) |
| BL | 19,2 Tm |
| Linear Mathematical Xmax (6) | ± 6,5 mm (± 0,26 in) |
| Le (1kHz) | 1,73 mH |
| Ref. Efficiency 1W@1m (half space) | 97,5 dB |

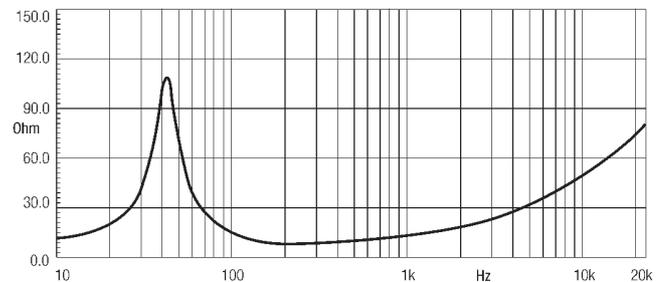
MOUNTING INFORMATIONS

| | |
|--------------------------------|---|
| 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 | 132,5 mm (5,23 in) |
| Flange and gasket thickness | 11,5 mm (0,45 in) |
| Net weight | 3,8 kg (8,38 lb) |
| Shipping weight | 4,6 kg (10,12 lb) |
| CardBoard Packaging dimensions | 332 x 332 x 184 mm(13,07 x 13,07 x 7,24 in) |

FREQUENCY RESPONSE CURVE OF 12ND730 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) 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.
- (2) 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 100Hz and 500Hz with the test specimen mounted in the same enclosure as given for 2 above.
- (3) 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.
- (4) 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.
- (5) Thiele - Small parameters are measured after the test specimen has been conditioned by 400 W AES power and represent the expected long term parameters after a short period of use.
- (6) 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.