

12ND930

Low Frequency Neodymium Transducer

Key Features

- 98 dB SPL 1W / 1m average sensitivity
- 75 mm (3 in) Interleaved Sandwich Voice coil (ISV)
- 500 W continuous pink noise power handling
- Neodymium magnet assembly
- Demodulating Ring for lower distortion
- Humidity resistant cone
- Ideal for compact high loading enclosures



General Description

The 12ND930 is a high power, high output, low frequency woofer meeting the most stringent requirements in high quality professional transducers. The high level of performance and sound quality have been achieved by exploiting the most advanced technologies available today.

Thanks to its versatility, the 12ND930 transducer can be used in two-way compact reflex enclosures with a 1.4" compression driver, in multi-way systems and in high loading sub woofers as small as 50 lt (compact reflex, band-pass and hornloaded configurations).

The neodymium magnet assembly 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 direct contact between the large heat sink and the basket, together with the magnetic structure, represents a fundamental improvement in thermal connection and heat dissipation. The result is increased power handling capabilities and lower power compression.

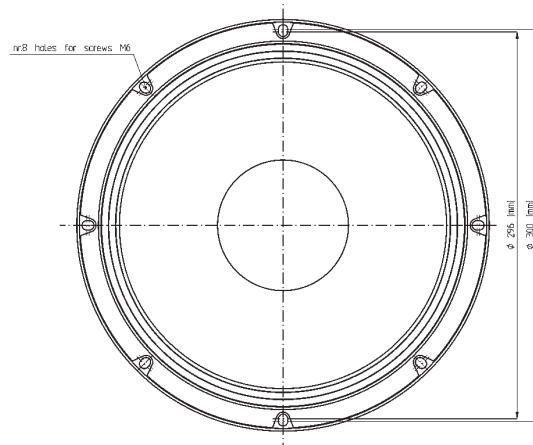
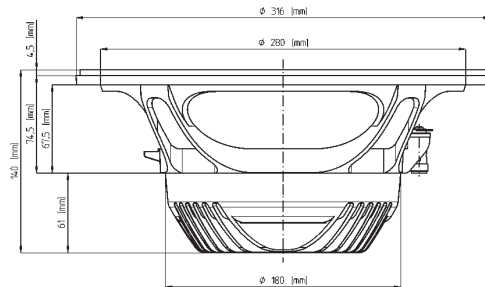
The curvilinear cone profile, created with a special high strength wood pulp, has been designed to achieve the best possible linearity within its frequency range. The cone surround in linen material is highly resistant to aging and fatigue. The in-house developed cone treatment is a humidity repellent and significant dampens bell mode resonance.

The 12ND930 employs our Interleaved Sandwich Voice coil (ISV) in which a high strength fiberfiberglas 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.

The already low distortion and sound quality are further improved by Double Demodulating Rings (DDR) that flatten impedance and phase with a constant power transfer.

A special coating applied to both the top and back plates makes the 12ND930 far more resistant to the corrosive effects of salts and oxidization.

022128N220 8 Ohm



NEODYMIUM LF-MB-MF TRANSDUCERS

12ND930

Low Frequency Neodymium Transducer

GENERAL SPECIFICATIONS

NOMINAL DIAMETER	300mm (12 in)
RATED IMPEDANCE	8 Ohm
CONTINUOUS PINK NOISE (1)	500W
CONTINUOUS POWER (2)	400W
PROGRAM POWER (3)	800W
PEAK POWER (4)	1600W
SENSITIVITY (5)	98dB
FREQUENCY RANGE (6)	46 ÷ 4500 Hz
POWER COMPRESSION @-10DB (7)	(40 W) 0,9 dB
POWER COMPRESSION @-3DB	(200 W) 2,2 dB
POWER COMPRESSION @FULL POWER	(400 W) 3,1 dB
MAX RECOMM. FREQUENCY	2000 Hz
RECOMM. ENCLOSURE VOLUME	30 ÷ 100 lt. (1,06 ÷ 3,53 cuft)
MINIMUM IMPEDANCE	6,4 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
POLARITY	positive voltage on red terminal gives forward cone motion

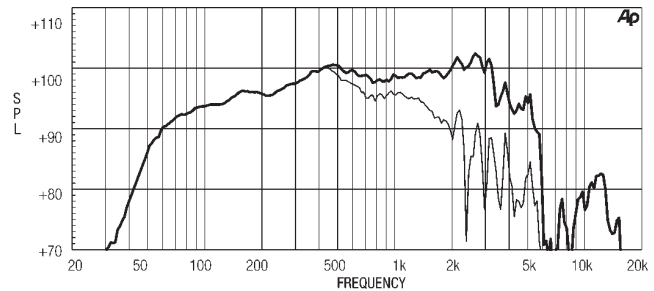
THIELE SMALL PARAMETERS (8)

Fs	50 Hz
Re	5,5 Ohm
Sd	0,0531 sq.mt. (82,31 sq.in.)
Qms	5,64
Qes	0,218
Qts	0,21
Vas	70 lt. (2,47cuft)
Mms	57 gr. (0,13 lb)
BL	21,2 Tm
Linear Mathematical Xmax (9)	± 6,5 mm (± 0,26 in)
Le (1kHz)	1,65 mH
Ref. Efficiency 1W@1m (half space)	98 dB

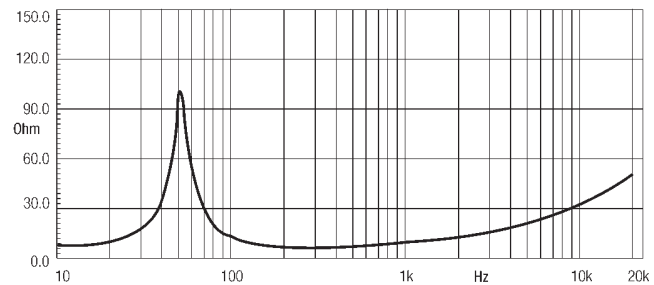
MOUNTING INFORMATION

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	140 mm (5,52 in)
Flange and gasket thickness	11,5 mm (0,45 in)
Net weight	4 kg (8,83 lb)
Shipping weight	4,8 kg (10,6 lb)
CardBoard Packaging dimensions	332 x 332 x 184 mm(13,07 x 13,07 x 7,24 in)

FREQUENCY RESPONSE CURVE OF 12ND930 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 standard
- (2) Continuous power rating is measured in 50 lit enclosure tuned 60Hz using a 40 - 400Hz band limited pink noise test signal applied continuously for 2 hours.
- (3) Program power rating is measured as for 2 above but 50% duty cycle.
- (4) 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.
- (5) 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.
- (6) 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.
- (7) 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.
- (8) Thiele - Small parameters are measured after the test specimen has been conditioned by 500 W AES power and represent the expected long term parameters after a short period of use.
- (9) 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.