

15ND930

Extended Low Frequency Neodymium Transducer

Key Features

- 98 dB SPL 1W / 1m average sensitivity
- 75 mm (3 in) edgewound voice coil
- 500 W continuous pink noise power handling
- Neodymium magnet assembly
- Double Demodulating Rings (DDR) for lower distortion
- Humidity resistant cone
- Ideal for very compact high loading enclosures



General Description

The 15ND930 is a high power, high output, low frequency woofer which meets 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.

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 direct contact between the large heat sink and basket, together with the magnetic structure, represent a fundamental improvement in thermal connection and heat dissipation. Hence, power handling capabilities are increased and power compression lowered.

The deep profile curvilinear cone, created 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 material is highly resistant to aging and fatigue. The in-house developed cone treatment is a humidity repellent and significantly dampens bell mode resonances.

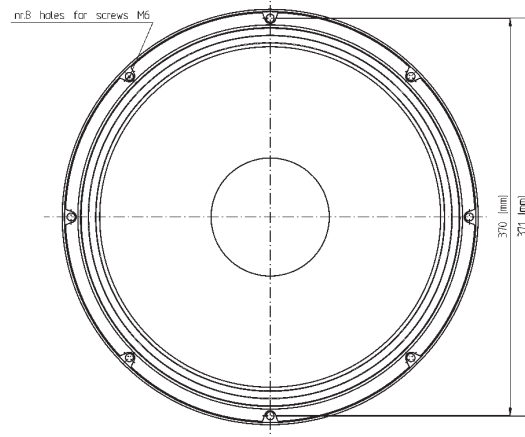
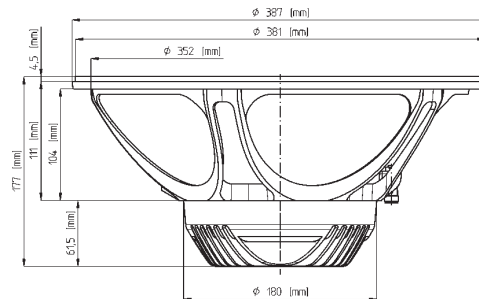
The 75mm edge-wound state-of-the-art voice coil assembly is wound on a strong fibreglas former to improve force transmission and power handling.

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.

Thanks to its versatility, the 15ND930 can be used in 2-way compact reflex enclosures with a 1.4" compression driver, in multiway systems and in high loading sub woofers as small as 70 lt (compact reflex, bandpass and horn loaded configurations).

A special coating applied to both the top and back plates makes the 15ND930 far more resistant to the corrosive effects of salts and oxidation.

022156N220 16 Ohm
022158N220 8 Ohm
022154N220 4 Ohm



NEODYMIUM LF-MB-MF TRANSDUCERS

15ND930

Extended Low Frequency Neodymium Transducer

GENERAL SPECIFICATIONS

NOMINAL DIAMETER	380mm (15 in)
RATED IMPEDANCE	8 Ohm
CONTINUOUS PINK NOISE (1)	500W
CONTINUOUS POWER (2)	400W
PROGRAM POWER (3)	800W
PEAK POWER (4)	1600W
SENSITIVITY (5)	98 dB
FREQUENCY RANGE (6)	40 - 4100 Hz
POWER COMPRESSION @-10DB (7)	(40 W) 0,6 dB
POWER COMPRESSION @-3DB	(200 W) 1,9 dB
POWER COMPRESSION @FULL POWER	(400 W) 2,8 dB
MAX RECOMM. FREQUENCY	1700 Hz
RECOMM. ENCLOSURE VOLUME	60 ÷ 140 lt. (2,12 ÷ 4,95 cuft)
MINIMUM IMPEDANCE	6,8 Ohm at 25°C
MAX PEAK TO PEAK EXCURSION	33 mm (1,3 in)
VOICE COIL DIAMETER	75 mm (2,95 in)
VOICE COIL WINDING MATERIAL	copper
POLARITY	positive voltage on red terminal gives forward cone motion

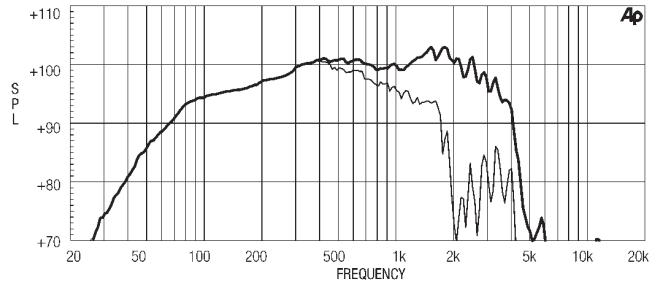
THIELE SMALL PARAMETERS (8)

Fs	36 Hz
Re	5,5 Ohm
Sd	0,085 sq.mt. (131,75 sq. in.)
Qms	5,3
Qes	0,23
Qts	0,22
Vas	206 lt. (7,28 cuft)
Mms	101 gr. (0,22 lb)
BL	23,8 Tm
Linear Mathematical Xmax (9)	± 7,5 mm (± 0,30 in)
Le (1kHz)	1,61 mH
Ref. Efficiency 1W@1m (half space)	98,2 dB

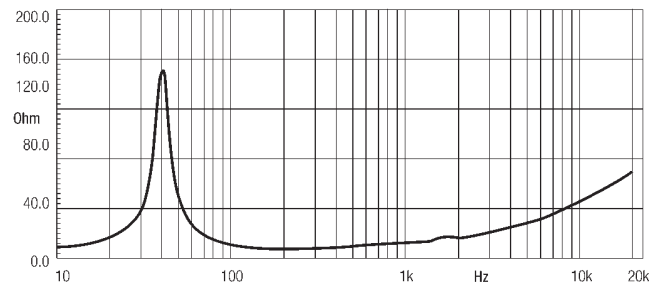
MOUNTING INFORMATIONS

Overall diameter	387 mm (15,24 in)
N. of mounting holes	8
Mounting holes diameter	7,15 mm (0,28 in)
Bolt circle diameter	370-371 mm (14,57-14,61 in)
Front mount baffle cutout ø	353 mm (13,9 in)
Rear mount baffle cutout ø	357 mm (14,06 in)
Total depth	177 mm (7 in)
Flange and gasket thickness	11,5 mm (0,45 in)
Net weight	4,1 kg (8,05 lb)
Shipping weight	4,8 kg (10,6 lb)
CardBoard Packaging dimensions	405 x 405 x 214 mm (15,94 x 15,94 x 8,43 in)

FREQUENCY RESPONSE CURVE OF 15ND930 MADE ON 125 LIT. ENCLOSURE TUNED 50HZ 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 125 lit enclosure tuned 50Hz 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 2,83 V 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; $(Hvc-Hg)/2 \cdot \#43; Hg/4$ 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.