

15ND830

Low Frequency Neodymium Transducer

Key Features

- 98 dB SPL 1W / 1m average sensitivity
- 75 mm (3 in) edgewound voice coil (ISV)
- 450 W continuous pink noise power handling
- Neodymium magnet assembly
- Weather protected cone for outdoor usage
- Ideal for compact reflex subwoofer and reflex multiway systems



General Description

The 15ND830 is a high power, high output, low frequency woofer meeting the most stringent requirements in high quality professional transducers.

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, represents a fundamental improvement in thermal connection and heat dissipation. Hence, power handling capabilities are increased and power compression lowered.

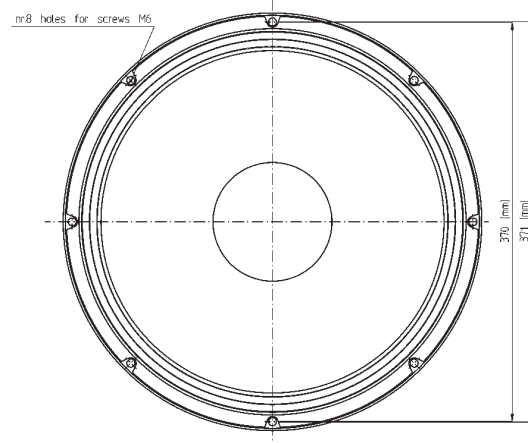
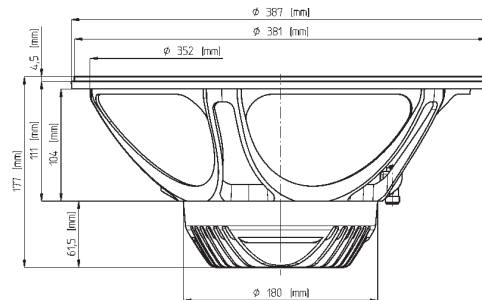
The deep profile curvilinear cone, created from a special high strength wood pulp, has been designed to achieve the best possible linearity within its frequency range. The cone surround made from a linen material is highly resistant to aging and fatigue. The in-house developed cone treatment is fully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

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

Thanks to its versatility, the 15ND830 can be used in 2-way compact reflex enclosures and reflex / band pass subwoofers.

A special coating applied to both the top and back plates makes the 15ND830 far more resistant to the corrosive effects of salts and oxidization.

022158N210 8 Ohm



NEODYMIUM LF-MB-MF TRANSDUCERS

15ND830

Low Frequency Neodymium Transducer

GENERAL SPECIFICATIONS

NOMINAL DIAMETER	380mm (15 in)
RATED IMPEDANCE	8 Ohm
CONTINUOUS PINK NOISE (1)	450W
CONTINUOUS POWER (2)	350W
PROGRAM POWER (3)	700W
PEAK POWER (4)	1500W
SENSITIVITY (5)	98dB
FREQUENCY RANGE (6)	38 ÷ 5000 Hz
POWER COMPRESSION @-10DB (7)	(35 W) 0,5 dB
POWER COMPRESSION @-3DB	(175 W) 2,0 dB
POWER COMPRESSION @FULL POWER	(350 W) 3,0 dB
MAX RECOMM. FREQUENCY	2000 Hz
RECOMM. ENCLOSURE VOLUME	80 ÷ 140 lt. (2,83 ÷ 4,95 cuft)
MINIMUM IMPEDANCE	6,7 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	aluminum
POLARITY	positive voltage on red terminal gives forward cone motion

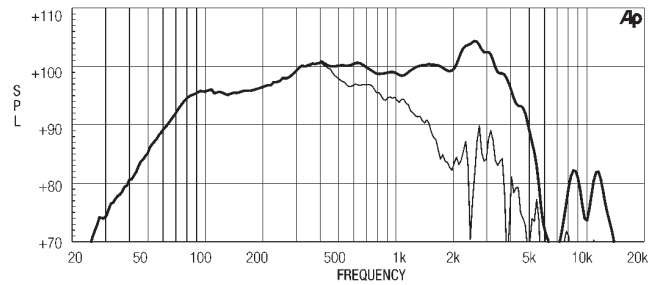
THIELE SMALL PARAMETERS (8)

Fs	39 Hz
Re	5,7 Ohm
Sd	0,085 sq.mt. (131,75 sq. in.)
Qms	3,9
Qes	0,35
Qts	0,32
Vas	213 lt. (7,5 cuft)
Mms	80 gr. (0,18 lb)
BL	18 Tm
Linear Mathematical Xmax (9)	± 6,5 mm (± 0,26 in)
Le (1kHz)	1,54 mH
Ref. Efficiency 1W@1m (half space)	97,5 dB

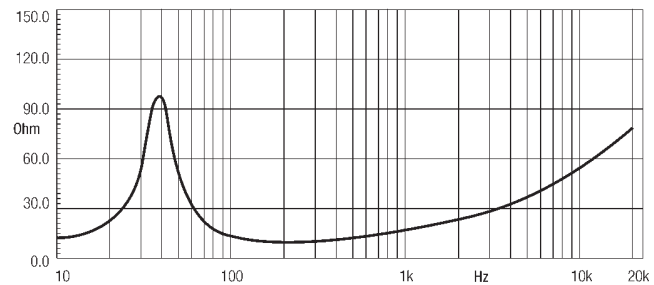
MOUNTING INFORMATION

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 (7,01 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 15ND830 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 450 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.

