

15NW530

Extended Low Frequency Neo Transducer

Key Features

- 96 dB SPL 1W / 1m average sensitivity
- 75 mm (3 in) edgewound copper voice coil
- 500 W AES power handling
- Double Silicon Spider (DSS) for improved excursion control and linearity
- Single Demodulating Ring (SDR) for lower distortion
- High excursion damped rubber roll surround
- Suitable for outdoor applications
- Ideal for compact subwoofer use



General Description

The 15NW530 low frequency neodymium transducer has been specifically developed for high power, low distortion, compact subwoofer applications.

The transducer finds its main application on compact vented subwoofers as small as 75 lit. properly tuned, but it is suitable also in bandpass or horn loaded applications.

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 transducer incorporates Eighteen Sound exclusive DSS technology (Double Silicon Spider) in combination with a single roll highly damped rubber surround.

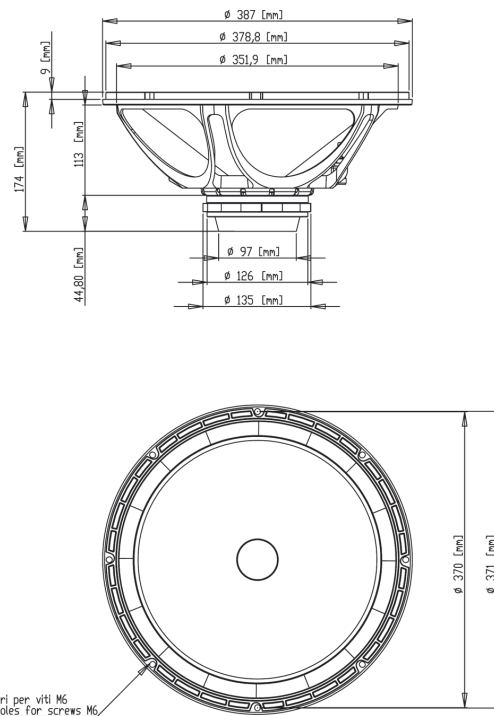
The already low distortion and sound quality are further improved by properly positioned Single Demodulating Ring (SDR technology) that flattens impedance and phase with a constant power transfer.

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

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 in-house developed cone treatment is a humidity repellent and significantly dampens bell mode resonances.

A special coating applied to both the top and back plates makes the 15NW530 far more resistant to the corrosive effects of salts and oxidization.

022158N530 8ohm



NEODYMIUM LF-MB-MF TRANSDUCERS

15NW530

Extended Low Frequency Neo Transducer

GENERAL SPECIFICATIONS

NOMINAL DIAMETER	380mm (15 in)
RATED IMPEDANCE	8 Ohm
AES POWER (1)	500W
PROGRAM POWER (2)	800W
PEAK POWER (3)	4000W
SENSITIVITY (4)	96dB
FREQUENCY RANGE (5)	47 ÷ 3500 Hz
POWER COMPRESSION @-10DB (6)	0,8 dB
POWER COMPRESSION @-3DB	2,3 dB
POWER COMPRESSION @FULL POWER	3,4 dB
MAX RECOMM. FREQUENCY	1000 Hz
RECOMM. ENCLOSURE VOLUME	70 ÷ 150 lt. (2,47 ÷ 10,6 cuft)
MINIMUM IMPEDANCE	6,30hm @ 180Hz
MAX PEAK TO PEAK EXCURSION	33 mm (1,3 in)
VOICE COIL DIAMETER	75 mm (3 in)
VOICE COIL WINDING MATERIAL	copper
SUSPENSION	Single Roll, Rubber
CONE	Curvilinear, Treated paper

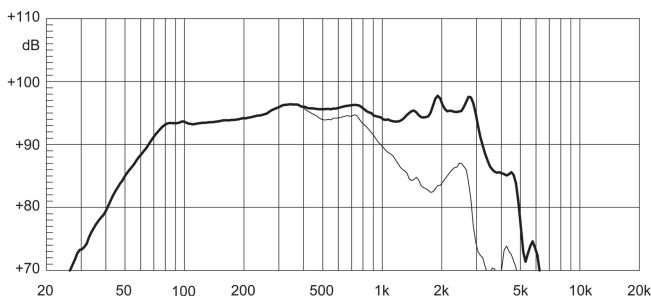
THIELE SMALL PARAMETERS (7)

Fs	38 Hz
Re	5,3 Ohm
Sd	0,09 sq.mt. (131,75 sq. in.)
Qms	5,81
Qes	0,35
Qts	0,33
Vas	154 lt. (5,4 cuft)
Mms	135 gr. (0,3 lb)
BL	22 Tm
Linear Mathematical Xmax (8)	± 7,5 mm (± 0,3 in)
Le (1kHz)	1,4 mH
Ref. Efficiency 1W@1m (half space)	95,7 dB

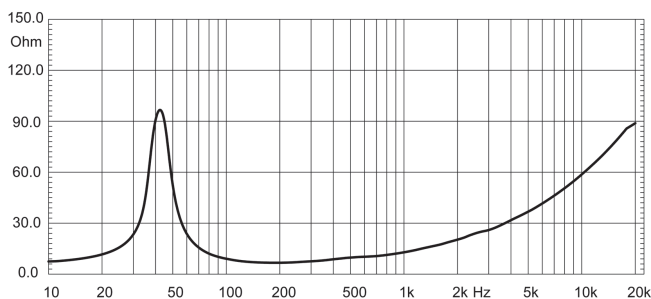
MOUNTING INFORMATION

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	169,5 mm (6,92 in)
Flange and gasket thickness	11,5 mm (0,45 in)
Net weight	4,0 kg (8,8 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 15NW530 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 power is determined according to AES2-1984 (r2003) standard
- (2) Program power rating is measured in 125 lit enclosure tuned @ 50Hz using a 40-400Hz band limited pink noise test signal with 50% duty cycle, applied for 2 hours.
- (3) 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.
- (4) 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 (1) above.
- (5) 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.
- (6) 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.
- (7) 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.
- (8) 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.

