

15NCX1000

SINGLE MOTOR DUAL MAGNET COAXIAL TRANSDUCER

KeyFeatures

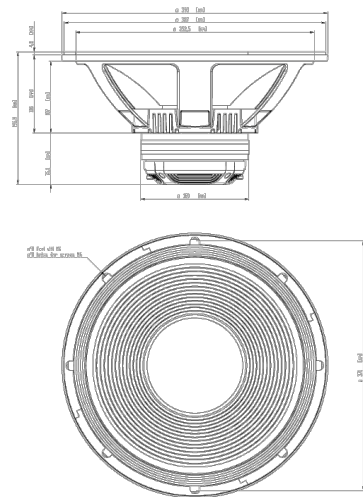
- 96dB LF -108dB HF SPL 2.83v average sensitivity
- Dual neodymium magnet single motor
- 1200W LF - 260W HF maximum program power handling
- Smooth on/off axis 90° response
- 100 mm (4") Interleaved Sandwich LF Voice coil (ISV)
- Aluminum Demodulating Ring (SDR) for minimum LF distortion
- 100 mm (4") Edge-wound Aluminum ribbon HF voice coil (EWAL)
- HF pure titanium diaphragm
- HF copper sleeve for reduced distortion and higher output
- Smooth on/off axis 90° response
- Suitable for compact enclosures and stage monitors

Description

The 15NCX1000 is a 15" diameter neodymium coaxial transducer designed for use in compact reflex enclosures and stage monitors. The LF cone provides smooth response within its intended frequency range thanks to its high damping pulp composition. Equipped with proprietary phase plug, the integrated 100mm (4") HF compression driver has been designed to give smooth coherent wavefront in the horn entrance in all working frequency range and high level manufacturing consistency. The phase plug assures low distortion with remarkable improvements in mid-high frequency reproduction. A copper ring on the pole piece reduces the inductance figure of frequencies above 10 kHz, improving phase and impedance linearisation. The 4" diameter HF diaphragm assembly uses a high strength, high temperature treated Nomex voice coil former joined directly to the titanium diaphragm on its upper bend edge, assuring extended frequency energy transfer. This improves linearity and shows unparalleled reliability when compared with a straight former joint. A specific HF exit profile design has been chosen in order to maximize the cone's profile coupling. The unique dual magnet single motor features high grade neodymium that makes the 15NCX1000 a lightweight speaker for its performance class.

Models

Model	Code	Info
15NCX1000	022158NC20	8 Ohm



General Specifications

Nominal Diameter	380 mm (15 in)
Rated Impedance	8 Ohm
AES Power	600 W
Program Power	1200 W
Peak Power	3600
Sensitivity	96 dB
Frequency Range	44 - 3600 Hz
Max Recomm. Frequency	1200 Hz
Recomm. Enclosure Volume	40 - 120 lt. (1,41 - 4.24 cu.ft.)
Minimum Impedance	6,1 Ohm at 25°C
Max Peak To Peak Excursion	30 mm (1,18 in)
Voice Coil Diameter	100 mm (3,94 in)
Voice Coil winding material	CCAW Aluminum
Suspension	Triple roll, polycotton
Cone	Curvilinear composite, Water repellent

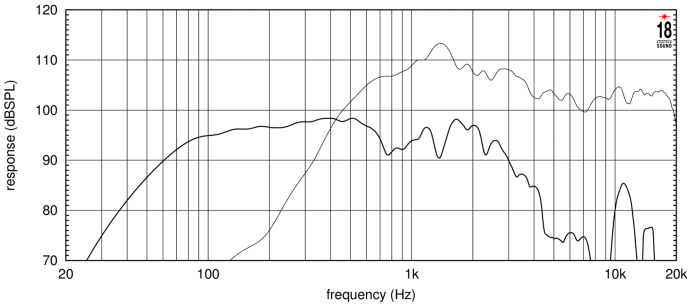
Thiele Small Parameters

Fs	53 Hz
Re	6.3 Ohm
Sd	0,0881 sq.mt. (137 sq.in.)
Qms	10,4
Qes	0,32
Qts	0,31
Vas	75 lt. (2.65 cuft)
Mms	110 gr. (0,24 lb)
BL	27,5 Tm
Linear Mathematical Xmax	± 7,5 mm (±0,30 in)
Le (1kHz)	1,40 mH
Half space efficiency	4,2 %

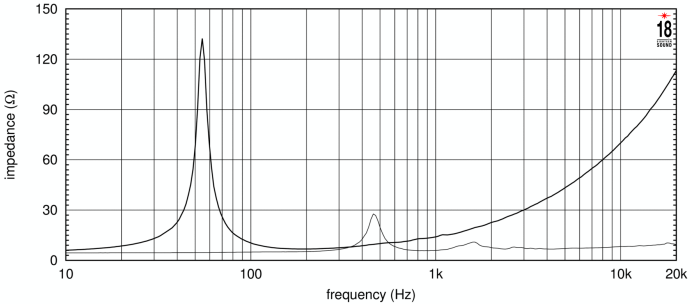
Mounting information

Overall diameter	393 mm (15,47 in)
N. of mounting holes and bolt	8
Mounting holes diameter	7,1 mm (0,28 in)
Bolt circle diameter	371 mm (14,6 in)
Front mount baffle cutout ø	354 mm (13,94 in)
Rear mount baffle cutout ø	360 mm (14,17 in)
Total depth	197 mm (7,76 in)
Flange and gasket thickness	12,5 mm (0,49 in)
Net weight	7 Kg
Shipping weight	7,9 kg
Packaging Dimensions	405 x 405 x 260 mm (15,94 x 15,94 x 10,24 in)

FREQUENCY RESPONSE CURVE



MADE ON 125 LIT. ENCLOSURE TUNED AT 45 HZ IN FREE FIELD (4PI) ENVIRONMENT. ENCLOSURE CLOSES THE REAR OF THE DRIVER. THE THIN LINE REPRESENTS THE HIGH FREQUENCY RESPONSE. FREE AIR IMPEDANCE MAGNITUDE CURVE



Notes

- 1) According to AES2-1984 (r2003) standard.
- 2) Program power rating is measured in 125 lit. enclosure tuned at 45 Hz using a 50-500Hz band limited pink noise test signal applied for 2 hours and with 50% duty cycle. Power measured on minimum impedance.
- 3) The peak power rating represents the maximum permitted instantaneous peak power level over a maximum period of 10ms which can be withstood by the loudspeaker without damage.
- 4) Sensitivity represents the averaged value of acoustic output as measured on the forward central axis of the cone, at a distance 1m from the baffle panel, when connected to 2.83V sine wave test signal swept between 100Hz and 1000Hz with the test specimen mounted in the same enclosure as specified for #2 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 a half-space environment.
- 6) Power compression represents the loss of sensitivity at the specified power, measured from 50- 500 Hz, after a 5 min pink noise preconditioning test, at the specified power.
- 7) Continuous Power is defined as a level that is 3 dB greater than the one measured with the new AES2-2012 standard, using continuous pink noise having 12 dB crest factor for 2 hours.
- 8) Program Power rating is defined as 3 dB greater than Continuous Power rating.
- 9) Sensitivity represents the average value of acoustic output as measured on the speaker axis at a distance of 1 m, when connected to 2.83 V sine wave swept between 1000-4000 Hz.
- 10) Minimum crossover frequency requires at least an 18 dB/Oct slope high pass filter, preferred 24 dB/oct slope high pass filter LR.
- 11) Thiele - Small parameters are measured after the test specimen has been conditioned for 1 hour with a 20 Hz sine, and represents the expected long term parameters after a short period of use.
- 12) Linear Math. Xmax is calculated as (Hvc-Hg)/2 + Hg/4 where Hvc is the coil depth and Hg.

