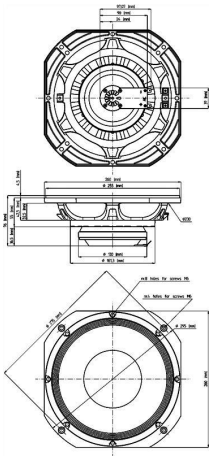
10NDA610 8Ω

LF drivers - 10.0 Inches



- 103 dB SPL 1W / 1m average sensitivity (AIC on)
- 75 mm (3 in) Interleaved Sandwich Voice coil (ISV)
- 400 W AES power handling
- Neodymium motor assembly
- A.I.C. (Active Impedance Control) technology
- Very shallow profile, 90 mm (3,5 in) total depth
- Humidity resistant cone and plates
- Suitable for high quality, very high SPL midrange frequency reproduction

The 10NDA610 is a high power, very high output, state-of-the-art midrange transducer for high quality professional use. The high level of sound reproduction is achieved thanks to extensive research by Eighteen Sound engineers, which focused on implementing mid frequencies intelligibility. The 10NDA610 is ideally used as a midrange in both horn and direct radiation, closed or reflex enclosures, as small as 4 liters. The 10NDA610 incorporates an Active Impedance Control (A.I.C.) consisting of an additional coil fixed on the pole piece and connected in parallel to the moving coil. The magnetic field generated by this coil has the following effects: 1) Impedance linearization 2) Acoustic and electric phase linearization 3) Significant increase of sensitivity and total SPL 4) Total harmonic distortion reduction 5) Constant power transfer The A.I.C. offers substantial advantages to the sound quality by not absorbing the moving coil's electromagnetic energy. The extremely powerful external neodymium magnet assembly assures high flux concentration, low power compression and excellent heat exchange. The levels of force factor and power handling are consequently at a top professional level, with the best power to weight ratio on the market today. The curvilinear cone, made with a high damping wood pulp, has been designed to achieve the best possible linearity within its frequency range. The in-house developed cone treatment acts as humidity repellent and significantly dampens bell mode resonances. The 75mm edge-wound voice coil assembly is wound on a strong fiberglas former to improve force transmission and power handling. A proprietary humidity-block cone treatment makes the transducer suitable for outdoor use in adverse weather conditions. In addition, a special coating applied to both the top and back plates makes the 10NDA610 far more resistant to the corrosive effects of salts and oxidization.

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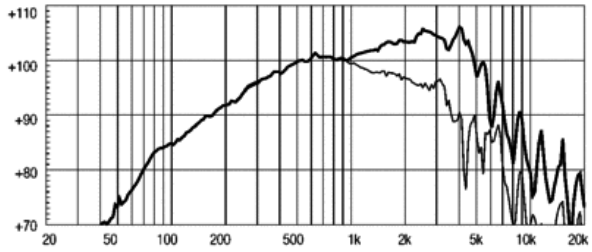

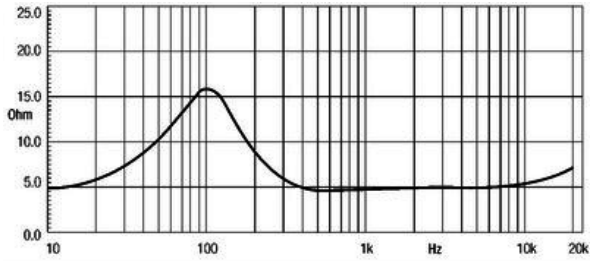

SPECIFICATIONS

Nominal Diameter	260 mm (in)
Nominal Impedance	8 Ω
Minimum Impedance	6.5 Ω
Nominal Power Handling[1]	400 W
Continuous Power Handling[2]	600 W
Sensitivity[3]	103.0 dB
Frequency Range	100 - 6100 Hz
Voice Coil Diameter	75 mm (3.0 in)
Winding Material	aluminum

DESIGN

Surround Shape	Double roll
Cone Shape	Curvilinear
Magnet Material	Neo
Woofer Cone Treatment	Weather protected
Recommended Enclosure	10.0 dm^3 (0.35 ft^3)
Recommended Tuning	90 Hz

PARAMETERS[4]

Resonance Frequency	89 Hz
Re	5.5 Ω
Qes	0.24
Qms	7.1
Qts	0.23
Vas	18.0 dm^3 (0.64 ft^3)
Sd	350.0 cm^2 (54.25 in^2)
Xmax	2.5 mm
Mms	30.0 g
Bl	20.3 Txm
Le	0.06 mH
EBP	370 Hz

MOUNTING AND SHIPPING INFO

Overall Diameter	260 mm (10.24 in)
Bolt Circle Diameter	275 mm (10.83 in)
Baffle Cutout Diameter	232.0 mm (9.13 in)
Depth	96 mm (3.78 in)
Flange and Gasket Thickness	14 mm (0.55 in)
Net Weight	3.5 kg (7.72 lb)
Shipping Weight	3.9 kg (8.6 lb)
Shipping Box	275 x 275 x 164 mm (10.83x10.83x6.46 in)

1. 2 hours test made with continuous pink noise signal within the range Fs-10Fs. Power calculated on rated minimum impedance. Loudspeaker in free air.
2. Power on Continuous Program is defined as 3 dB greater than the Nominal rating.
3. Applied RMS Voltage is set to 2.83 V for 8 ohms Nominal Impedance.
4. Thiele-Small parameters are measured after a high level 20 Hz sine wave preconditioning test.

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