21NLW9601 4Ω

LF drivers - 21.0 Inches

- 98 dB SPL 1W / 1m average sensitivity
- 135 mm (5.3 in) split winding four layers ISV copper coil
- 3600 W program power handling
- Carbon fiber reinforced treated cellulose cone
- Triple Silicon Spider (TSS) improves excursion control and linearity even in extreme
- loading and SPL conditions
- Single Demodulating Ring (SDR) for lower distortion
- Low noise cooling design for very low power compression
- Suitable for bandpass and horn loaded subwoofer designs

Eighteen Sound Srl
Via Botticelli 8 - 42124 Mancasale (RE) - ITALY - Ph. +39 0522 1861800 - Fax +39 0522 1861801 - info@eighteensound.it

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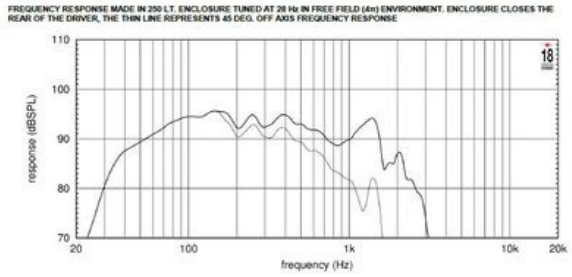
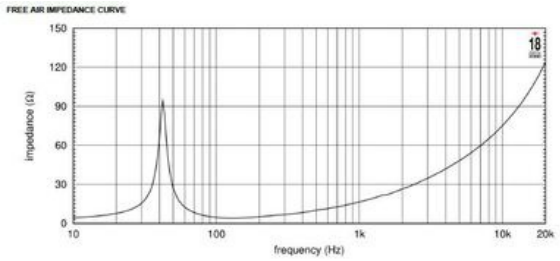
The 21NLW9601 is a 21 inch neodymium high performance transducer. It is the evolution of the 21NLW9600 speaker. The transducer is suitable for high loading, ultra-low frequency horn loaded as well as bandpass subwoofer designs. For optimum results recommended amplifier should be able to deliver 3600 Watt program power without clipping. At the heart of the transducers stands the improved Triple Silicon Spider (TSS) lets the 21NLW9601 being able to control the moving mass with exceptional linearity, showing an exceptional stability of mechanical parameter values in the long term. The transducer design features include a high performance large displacement suspension system for improved cone control even at very high level of SPL matching. The state-of-the-art 5,3" diameter ISV copper voice coil shows a inside-outside split winding, four layers design, enabling the 21NLW9601 to handle up to 3600W program power. Bl force factor as well as all electro-dynamic parameters are linear within the working range. This, together with the high excursion behavior - 70 mm before damage, ±14 mm linear Xmax - makes the 21NLW9601 an extremely low distortion, highly dynamic transducer. The already low distortion and sound quality are further improved by an aluminum Single Demodulating Ring (SDR technology) that flatten impedance and phase with a constant power transfer. The 21NLW9601 has been developed after intense FEA and fluido-dynamics simulation and testing, focusing on dissipating the heat generated by the powerful 5.3" coil. Special attention was given to the optimization of air flow into the gap without introducing audible noise. A special low density material air diffractor placed into the backplate acts as a cooling system, increasing the power handling capability and lowering the power compression figure. Weight reduction was a key development aspect of the 21NLW9601, resulting in a net value of 14kg (30,9b). The carbon fiber reinforced, straight ribbed cone shows a proprietary resin treatment for extra pulp strength and water repellent properties. A special coating applied to both the top and back plates makes the transducer far more resistant to the corrosive effects of salts and oxidization.





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SPECIFICATIONS

Nominal Diameter	533 mm (in)
Nominal Impedance	4 Ω
Minimum Impedance	4.0 Ω
Nominal Power Handling[1]	1800 W
Continuous Power Handling[2]	3600 W
Sensitivity[3]	98.0 dB
Frequency Range	31 - 1800 Hz
Voice Coil Diameter	135 mm (5.3 in)
Winding Material	copper

DESIGN

Surround Shape	Triple roll
Cone Shape	Straight
Magnet Material	Neo
Spider	Triple silicon spider
Woofer Cone Treatment	Weather protected
Recommended Enclosure	200.0 dm^3 (7.06 ft^3)
Recommended Tuning	41 Hz

PARAMETERS[4]

Resonance Frequency	41 Hz
Re	3.0 Ω
Qes	0.33
Qms	10.56
Qts	0.32
Vas	123.0 dm^3 (4.34 ft^3)
Sd	1662.0 cm^2 (257.61 in^2)
Xmax	14.0 mm
Mms	450.0 g
Bl	32.7 Txm
Le	2.18 mH
EBP	124 Hz

MOUNTING AND SHIPPING INFO

Overall Diameter	545 mm (21.46 in)
Bolt Circle Diameter	520 mm (20.47 in)
Baffle Cutout Diameter	492.0 mm (19.37 in)
Depth	250 mm (9.84 in)
Flange and Gasket Thickness	18 mm (0.71 in)
Net Weight	13.5 kg (29.76 lb)
Shipping Weight	15.5 kg (34.17 lb)
Shipping Box	570x570x290 mm (22.44x22.44x11.42 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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