



Features

- * 5" Large Format Voice Coil
- * 8000 Watts Peak Power Handling
- * Active Balanced Cooling
- * Ferrite Magnetics
- * Double Spider Suspension

Applications

The SD-21EL is an ultra high output low frequency transducer. The 21 inch (530mm) diameter piston will produce extremely high sound pressure levels at very low frequencies and is ideal for high level deep bass and sub woofer response in both live sound and recorded music venues. The combination of a large radiating area and high linear displacement will generate substantial acoustic power. The operating range is 20Hz to 200Hz. The transducer uses high energy neodymium magnetics to achieve a very high acoustic output to weight ratio.

The SD-21EL employs an extremely large 5 inch (127mm) diameter voice coil that provides an AES rated 2000 watts of continuous power handling and a full 8000 watts of peak rated power handling when sufficient amplifier headroom is available. It is recommended that the transducer be loaded into a properly designed vented enclosure. The SD-21EL utilizes P.Audio's Auto Balanced Cooling (ABC) technology to not only improve transducer power handling and reliability but to also increase power compression performance by carefully balancing and directing airflow to critical areas.

The voice coil design is an "inside/outside" geometry with P.Audio's square wire technology to improve conversion efficiency and provide a very large cross-sectional area for superior cooling.

System linearity is achieved by employing magnetic flux demodulation devices in the structure to increase fidelity and sonic accuracy. The system suspension has been designed specifically for high linear displacement and extended low frequency response. The double spider design insures very high displacement and linear response while maintaining excellent control. For additional mechanical power handling it is recommended that a high order high pass filter be used and tuned immediately below the enclosure tuning frequency. The cone has been treated with a conformal coating designed to provide additional mechanical damping and moisture resistance.

The transducer chassis is a die cast aluminum design that insures a very high degree of structural integrity.

Specifications

General Specifications

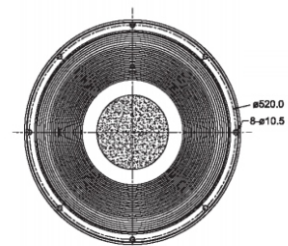
Nominal diameter.....	530mm/21in
Rated Impedance.....	8ohm
Operating Bandwidth.....	30Hz-300Hz
Power Handling Capacity.....	2200 W(rms)
Sensitivity 2.83V, 1M.....	98 dB
Effective Piston Diameter.....	460mm 18.1Inch
Voice Coil Diameter.....	127 mm/ 5 inch

Thiele - Small Parameters

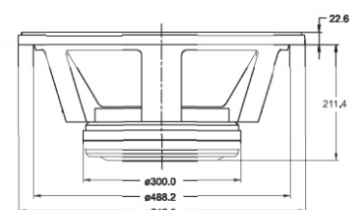
Resonance Frequency.....	Fs 32.8 Hz
DC Resistance.....	Re 5.8ohm
Mechanical Q Factor.....	Qms 9.526
Electrical Q Factor.....	Qes 0.378
Total Q Factor.....	Qts 0.364
BL Factor.....	BL 31.55 TM
Effective Moving Mass.....	Mms 315.02 gr
Equivalent Cas air load.....	Vas 292.92 liters
Effective Piston Area.....	Sd 0.1662 m ²
Voice-Coil inductance @1KHz.....	Le 0.81 mH
Half Space Efficiency.....	Eff 2.64%
Airgap Height.....	Hag 15.0 mm
Voice-coil Height.....	Hvc 30.0 mm
Voice-Coil Over-Hung.....	Xmax 7.5 mm

Physical Information

Basket.....	Die Cast Aluminum
Magnet Type, Size OD×ID×H (mm).....	300 × 170 × 18
Voice Coil Former.....	Glass Fiber Bobbin (Ployimide) High Temp 400C
Voice Coil Material.....	Aluminum Wire / inside-Outside High Temp 300C
Cone Material.....	Pulp Paper
Surround.....	Cloth
Unit Weight/Piece.....	19.5 kg / 42.99 lb
Gross Weight/Piece.....	20 kg / 44 lb



TOP VIEW



SIDE VIEW

Frequency Response & Impedance Curve

