

## Ferrite Magnet Die-cast Chassis Driver



### Features

- 3.9" Very Large Format Voice Coil
- 4000 Watts Peak Power Handling
- Active Balanced Cooling
- Ferrite Magnetics
- Square Wire Inside/Outside Coil Design
- Single Spider Suspension
- Integrated Demodulation Rings
- Die Cast Aluminum Chassis

### Applications

The SD12-1000EL is a high output wide bandwidth transducer designed for low frequency response in two way designs and for high output mid bass. The 12 inch (305mm) diameter piston will produce extremely high sound pressure levels at both low and mid band frequencies. This design is optimized for both live sound and recorded music venues. The transducer uses high energy ferrite magnetics to achieve a very high acoustic output to weight ratio. The SD12-1000EL has been optimized for use in two and three way sound reinforcement system designs and may be used in either mid bass or low frequency applications. The operating bandwidth is 60Hz to 3000Hz.

The SD12-1000EL employs a large 3.9 inch (99.3mm) diameter voice coil that provides an AES rated 1000 watts of continuous power handling and a full 4000 watts of peak rated power handling when sufficient amplifier headroom is available. The SD12-1000EL 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 for both low frequency and mid band response. The double spider design insures very high displacement and linear response while maintaining excellent control.

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

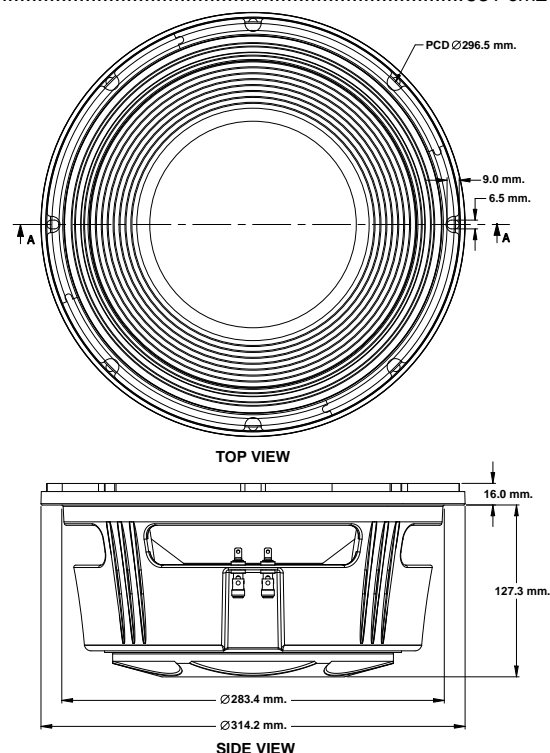
### Specifications

#### General Specifications

Nominal diameter.....	305 mm/12 in
Power rating.....	1000 W(AES)
Nominal impedance.....	8Ω
Sensitivity.....	97 dB
Frequency range.....	60-3000 Hz
Chassis type.....	Cast aluminum
Magnet type.....	Ferrite
Magnet weight.....	5.20 kg/183.5 oz
Voice coil diameter.....	99.3 mm/3.9 in
Coil material.....	SV-SQ
Former material.....	Glass fiber
Cone material.....	Paper
Surround material.....	Cloth
Suspension.....	Single
X-max.....	4.65 mm/0.18 in
Gap depth.....	12.0 mm/0.47 in
Voice coil winding width.....	21.3 mm/0.84 in
Net Weight.....	11.8 kg/26.0 lb
Packing Dimension WxDxH.....	355 x 355 x 190 mm
Shipping Weight.....	12.6 kg/27.8 lb

#### Small Signal Parameters

Re.....	5.0Ω
Fs.....	57 Hz
Mms.....	80.3 g/2.83 oz
Mmd.....	73.3 g/2.59 oz
Qms.....	8.0
Qes.....	0.24
Qts.....	0.23
Vas.....	39.05 lt/1.38 ft <sup>3</sup>
Bl.....	24.51 Tm
Cms.....	9.9e-05 m/N
Rms.....	3.59 Ns/m
Le (at 1kHz).....	0.69 mH
Sd.....	531 cm <sup>2</sup>



### Frequency Response and Impedance Curves

