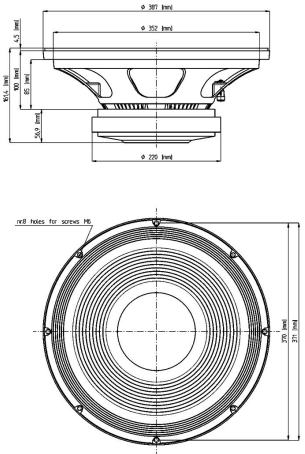
15W1301 8Ω

LF drivers - 15.0 Inches



- 99 dB SPL 1W / 1m average sensitivity
- 100 mm (4 in) Interleaved Sandwich Voice coil (ISV
- 800W AES power handling
- Twin Spider (TS) for improved linearity
- Double Demodulating Rings (DDR) for lower distortion
- Improved heat dissipation via unique basket design
- Weather protected cone and plates for outdoor usage

Eighteen Sound Srl
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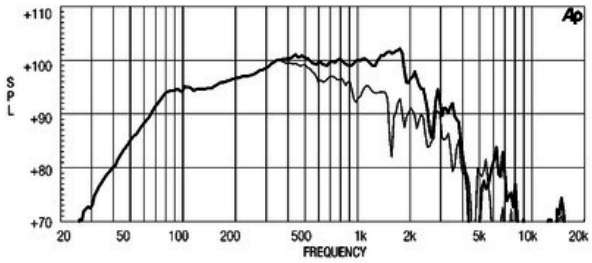
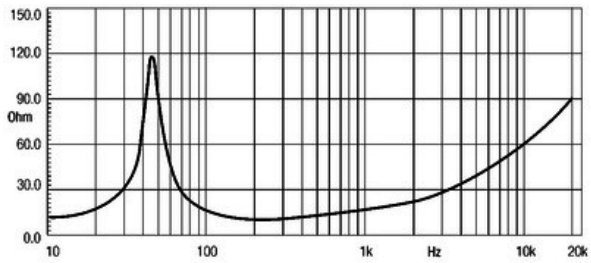
The 15W1301 is a low frequency loudspeaker which sets a new industry standard in 15" (380 mm) high output transducers. The 15W1301 is an ideal bass reflex driver but it is also very suitable for bandpass enclosures. It has been designed for use as the low frequency component in high power fixed loudspeaker systems, cinema bass channels, bass instrument cabinets, etc., where extended bass response is required.
The 15W1301 is fitted with a lightweight, shallow profile, carbon fiber reinforced, straight ribbed cone carried by a triple roll, polycotton suspension and special twin spider assembly. The result is a tightly controlled piston assembly with exceptional linearity, featuring a higher free-air resonant frequency, thanks to a lower moving mass. These characteristics, coupled with the high continuous power handling capability and high sensitivity, produce a driver which is the perfect choice for reflex systems.
The state-of-the-art voice coil employs our own Interleaved Sandwich Voice coil (ISV) technology in which a high strength fiberglas former carries windings on both the outer and inner surfaces to achieve a balanced coil with a uniform distribution of mass and motive energy. This results in an extremely linear motor assembly.
The excellent performance capabilities of this loudspeaker have been further enhanced using Double Demodulating Rings (DDR) designed to dramatically reduce the intermodulation and harmonic distortion and improve the transient response.
Heat dissipation has been achieved by incorporating air channels between the basket and the magnetic top plate. Further ventilation is provided using air vents in the back plate that direct air into the lower part of the voice coil gap.
The magnetic structure has been optimized using our in-house FEA CAD resource to maximize the flux density within the voice coil gap.
An exclusive cone treatment process designed to improve the paper pulp strength and provide water repellent properties is applied to both sides of the cone. This, in conjunction with the special anti-corrosion treatment given to both the top and back plates, enables the 15W1301 to be used outdoors and in marine environments.





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SPECIFICATIONS

Nominal Diameter	380 mm (in)
Nominal Impedance	8 Ω
Minimum Impedance	0.0 Ω
Nominal Power Handling[1]	800 W
Continuous Power Handling[2]	1200 W
Sensitivity[3]	99.0 dB
Frequency Range	39 - 2800 Hz
Voice Coil Diameter	100 mm (4.0 in)
Winding Material	aluminum

DESIGN

Magnet Material	Ferrite
Woofer Cone Treatment	Weather protected

PARAMETERS[4]

Resonance Frequency	48 Hz
Re	5.5 Ω
Qes	0.37
Qms	8.5
Qts	0.32
Vas	123.0 dm^3 (4.34 ft^3)
Sd	900.0 cm^2 (139.5 in^2)
Xmax	6.0 mm
Mms	99.0 g
Bl	22.3 Txm
Le	1.55 mH
EBP	129 Hz

MOUNTING AND SHIPPING INFO

Overall Diameter	387 mm (15.24 in)
Bolt Circle Diameter	370 mm (14.57 in)
Baffle Cutout Diameter	353.0 mm (13.9 in)
Depth	161 mm (6.34 in)
Flange and Gasket Thickness	18 mm (0.71 in)
Net Weight	12.3 kg (lb)
Shipping Weight	13.4 kg (lb)
Shipping Box	405 x 405 x 214 mm (15.94x15.94x8.43 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.