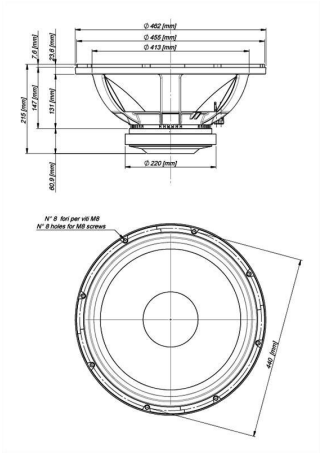
18W1001 8Ω

LF drivers - 18.0 Inches



- 99 dB SPL 1W / 1m average sensitivity
- 100 mm (4 in) Interleaved Sandwich Voice coil (ISV)
- 1000 W AES power handling
- Double Silicon Spider (DSS)
- Weather protected cone and plates for outdoor usage
- Improved heat dissipation via unique basket design
- Suitable for high SPL subwoofer designs

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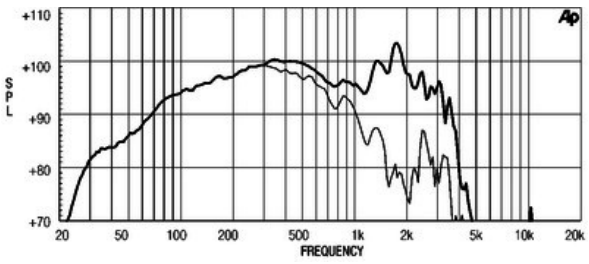
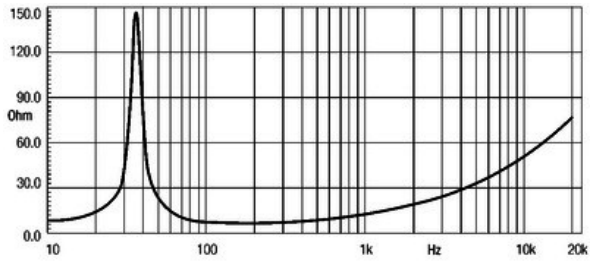
The 18W1001 is the updated version of the classic 18W1000, a low frequency woofer which has set a benchmark in 18" (460 mm) high output transducers.
It represents a further development of the Eighteen Sound 18LW1250 but has a lighter mass and increased sensitivity.
The 18W1001 can be used as a low bass or sub-woofer component in either a reflex, bandpass or horn loaded configuration, in high power fixed or touring loudspeaker systems. It provides clean, linear, undistorted low frequency reproduction at very high power levels.
The high excursion capabilities of the surround and suspension system, in conjunction with the Double Silicon Spider (DSS), enables the 18W1001 to achieve high levels of linear travel while maintaining full control of the moving mass.
The high quality curvilinear cone assures smooth response and exceptional strength with maximum reliability under high mechanical stress.
The 100mm copper wire voice coil employs the 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.
Excellent heat dissipation has been achieved by incorporating air channels between the basket and magnetic top plate.
Maximum flux concentration and force factor in the gap is assured by the unique shape and design of the top and back plates, which have been researched and designed using our in-house magnetic flux FEA CAD resource.
Due to the increasing use of audio systems at outdoor events, the ability of the 18W1001 to perform in adverse weather conditions or in areas of high humidity is a key feature. This has been achieved using an exclusive cone treatment and magnetic plate processes which resist corrosion and render the cone water repellent.





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SPECIFICATIONS

Nominal Diameter	460 mm (in)
Nominal Impedance	8 Ω
Nominal Power Handling[1]	1000 W
Continuous Power Handling[2]	1400 W
Sensitivity[3]	99.0 dB
Frequency Range	37 - 4700 Hz
Voice Coil Diameter	100 mm (4.0 in)
Winding Material	copper

DESIGN

Surround Shape	M-roll
Cone Shape	Curvilinear
Magnet Material	Ferrite
Spider	Double Silicon Spider
Recommended Enclosure	180.0 dm^3 (6.36 ft^3)
Recommended Tuning	40 Hz

PARAMETERS[4]

Resonance Frequency	35 Hz
Re	5.8 Ω
Qes	0.24
Qms	7.1
Qts	0.23
Vas	268.0 dm^3 (ft^3)
Sd	1134.0 cm^2 (175.77 in^2)
Xmax	7.0 mm
Mms	139.0 g
Bl	27.6 Txm
Le	2.45 mH
EBP	145 Hz

MOUNTING AND SHIPPING INFO

Overall Diameter	462 mm (in)
Bolt Circle Diameter	438 mm (in)
Baffle Cutout Diameter	416.0 mm (in)
Depth	205 mm (in)
Flange and Gasket Thickness	19 mm (in)
Net Weight	13.6 kg (29.98 lb)
Shipping Weight	14.5 kg (31.97 lb)
Shipping Box	482 x 482 x 257 mm (18.98x18.98x10.12 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.