

15W500

Key Features

- 100,5dB SPL 1W / 1m average sensitivity
- 65 mm (2,5 in) Interleaved Sandwich Voice coil (ISV)
- 350 W AES power handling
- Excellent transient response and cone damping
- Improved heat dissipation via unique basket design
- Ideal for compact two way and multiway systems

General Description

The 15W500 is a fine example of a high quality transducer providing the right balance between performance and engineering costs. This ferrite low frequency driver satisfies the demand for a 15" loudspeaker which combines excellent linearity with good sensitivity and power handling characteristics.

The 15W500 has been designed for two-way or multi-way reflex systems.

The high quality paper cone has a smooth, Eighteen Sound specified curvilinear textured profile design that eliminates bell-mode resonance within the intended frequency range. The cone is carried by a specially treated and dampened multi-roll linen suspension designed to control excursion while maintaining piston action linearity.

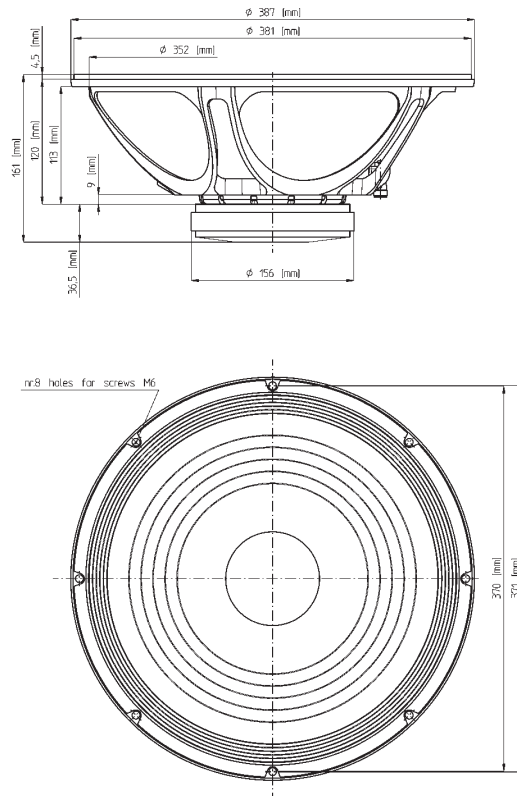
The 15W500 also employs our Interleaved Sandwich Voice coil (ISV) technology, in which a high strength fiberglass former carries windings on both the outer and inner surfaces to achieve a mass balanced coil. This results in an extremely linear motor assembly with a reduced tendency for eccentric behavior when driven hard.

Voice coil cooling has been achieved by incorporating airways between the chassis back plate and the magnetic top plate, allowing heated air from the voice coil and gap to be channeled away and dissipated by the chassis basket. This technology is the result of a meticulous 3D CAD design project.

Low Frequency Transducer



0221584310 8 Ohm



FERRITE LF-MB-MF TRANSDUCERS

15W500

Low Frequency Transducer

GENERAL SPECIFICATIONS

NOMINAL DIAMETER	380 mm (15 in)
RATED IMPEDANCE	8 Ohm
AES POWER (1)	350 W
PROGRAM POWER (2)	500 W
PEAK POWER (3)	1000 W
SENSITIVITY (4)	100,5 dB
FREQUENCY RANGE (5)	50 ÷ 4500 Hz
POWER COMPRESSION @-10DB (6)	0,7 dB
POWER COMPRESSION @-3DB	2,5 dB
POWER COMPRESSION@FULL POWER	4,0 dB
MAX RECOMM. FREQUENCY	3000 Hz
RECOMM. ENCLOSURE VOLUME	80 ÷ 200 lt. (2,47 ÷ 5,3 cuft)
MINIMUM IMPEDANCE	6 Ohm at 25°C
MAX PEAK TO PEAK EXCURSION	23 mm (0,88 in)
VOICE COIL DIAMETER	64 mm (2,5 in)
VOICE COIL WINDING MATERIAL	aluminum
SUSPENSION	Multiroll, Polycotton
CONE	Curvilinear ribbed, Paper

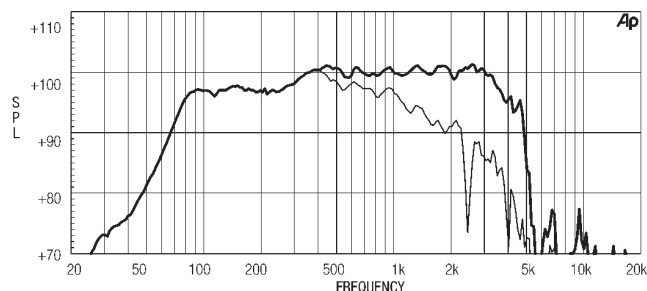
THIELE SMALL PARAMETERS (7)

Fs	50 Hz
Re	5,2 Ohm
Sd	0,085 sq.mt. (131,75 sq.in.)
Qms	9,64
Qes	0,55
Qts	0,52
Vas	189 lt. (6,68 cuft)
Mms	55 gr. (0,12 lb)
BL	12,6 Tm
Linear Mathematical Xmax (8)	± 4 mm (±0,16 in)
Le (1kHz)	1,04 mH
Ref# Efficiency 1W@1m (half space)	98,2 dB

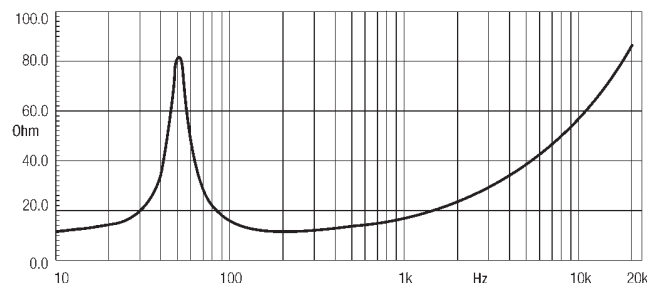
MOUNTING INFORMATION

Overall diameter	387 mm (15,23 in)
N# of mounting holes	8
Mounting holes diameter	7,15 mm (0,28 in)
Bolt circle diameter	370 - 371 mm (14,55 - 14,6 in)
Front mount baffle cutout ø	353 mm (13,90 in)
Rear mount baffle cutout ø	357 mm (14,06 in)
Total depth	161 mm (6,33 in)
Flange and gasket thickness	11,5 mm (0,45 in)
Net weight	4,3 kg (9,4 lb)
Shipping weight	5,1 kg (11,2 lb)
CardBoard Packaging dimensions	405 x 405 x 214 mm (15,94 x 15,94 x 8,43 in)

FREQUENCY RESPONSE CURVE OF 15W500 MADE ON 125 LIT. ENCLOSURE TUNED 50HZ IN FREE FIELD (4PI) ENVIRONMENT. ENCLOSURE CLOSES THE REAR OF THE DRIVER. THE THIN LINE REPRESENTS 45 DEG. OFF AXIS FREQUENCY RESPONSE



FREE AIR IMPEDANCE MAGNITUDE CURVE



NOTES

- (1) AES power is determined according to AES2-1984 (r2003) standard
- (2) Program power rating is measured in 125 lit enclosure tuned 50Hz using a 40 - 400Hz band limited pink noise test signal with 50% duty cycle, applied for 2 hours.
- (3) The peak power rating represents the maximum permitted instantaneous peak power level over a maximum period of 10ms which will be withstood by the loudspeaker without damage.
- (4) Sensitivity represents the averaged value of acoustic output as measured on the forward central axis of cone, at distance 1m from the baffle panel, when connected to 2,83 V sinewave test signal swept between 100Hz and 500Hz with the test specimen mounted in the same enclosure as given for (1) above.
- (5) Frequency range is given as the band of frequencies delineated by the lower and upper limits where the output level drops by 10 dB below the rated sensitivity in half space environment.
- (6) Power compression represents the loss of sensitivity for the specified power, measured from 50-500 Hz, after a 5 min pink noise preconditioning test at the specified power.
- (7) Thiele - Small parameters are measured after the test specimen has been conditioned by 350W AES power and represent the expected long term parameters after a short period of use.
- (8) Linear Math. Xmax is calculated as $(Hvc-Hg)/2 \cdot Hg/4$ where Hvc is the coil depth and Hg is the gap depth.

Eighteen Sound engages in research and product improvement. New materials and design refinements can be introduced into existing products without notice.