

15W600

Low Frequency Transducer

KeyFeatures

- 98 dB SPL 1W / 1m average sensitivity
- 75 mm (3 in) Interleaved Sandwich Voice coil (ISV)
- 500W AES power handling
- Reinforced poly-cotton suspension
- Improved heat dissipation via unique basket design
- Ideal for compact subwoofer and multiway reflex systems

Description

The 15W600 low frequency transducer meets the specific market requirement for a loudspeaker which combines good linearity and efficiency with high power handling capabilities.

It is an ideal woofer and subwoofer choice for all two or three-way ferrite systems. Although primarily developed for compact reflex enclosures (around 70 lt), the 15W600 driver's versatile characteristics also render it suitable for a wide variety of loading typologies, including bandpass and horn loaded. When used in a two-way system, we recommend a 1.4" or 2" exit HF compression driver match in order to achieve the best sound quality results.

The deep profile curvilinear paper cone has been made from a special high strength wood pulp designed to achieve the best possible linearity within its intended frequency range and to control bell-mode resonances around the cone circumference. The cone is carried by an unusually deep profile, double half-roll suspension formed of a linen-like material that is more resistant to aging and fatigue than traditional cotton-based ones.

The 75 mm Ø state-of-the-art voice coil is similar to those fitting our top-of-the-range 18" and 15" models. This employs our Interleaved Sandwich Voice coil (ISV) system, in which a high strength fiberglas 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.

Excellent heat dissipation has been obtained by incorporating air channels between basket and magnetic top plate.

Due to the increasing use of audio systems at outdoor events, the ability to perform in adverse, high humidity weather conditions is a key feature of the 15W600. This has been achieved using exclusive cone and magnetic plate treatment processes which enable the speaker to resist corrosion and render the cone water repellent at the same time.

Models

Model	Code	Info
0221584220	0221584220	8Ohm
0271584220	0271584220	R-kit 8Ohm

General Specifications

Nominal Diameter	380 mm (15 in)
Rated Impedance	8 Ohm
AES Power	500 W
Program Power	600 W
Peak Power	1600 W
Sensitivity	98 dB
Frequency Range	38 - 4400 Hz
Power Compression @-10dB	0,7 dB
Power Compression @-3dB	2,2 dB
Power Compression @Full Power	3,2 dB
Max Recomm. Frequency	1800 Hz
Recomm. Enclosure Volume	70 - 140 Lt. (2,47 - 5 cuft)
Minimum Impedance	
Max Peak To Peak Excursion	35 mm (1,38 in)
Voice Coil Diameter	75 mm (2,95 in)
Voice Coil winding material	copper
Suspension	
Cone	

Thiele Small Parameters

Fs	38 Hz
Re	5,6 Ohm
Sd	0,085 sq.mt. (131,75 sq.in.)
Qms	7,2
Qes	0,3
Qts	0,29
Vas	183 lt. (6,46 cu ft)
Mms	93 gr. (0,21 lb)
BL	20,5 Tm
Linear Mathematical Xmax	± 6,5 mm (± 0,26 in)
Le (1kHz)	1,85 mH
Ref. Efficiency 1W@1m (half space)	97,5 dB

Mounting information

Overall diameter	387 mm (15,23 in)
N. of mounting holes and bolt	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	168,5 mm (6,63 in)
Flange and gasket thickness	19,5 mm (0,76 in)
Net weight	8,6 kg (18,98 lb)
Shipping weight	9,7 kg (21,41 lb)
Packaging Dimensions	9,7 kg (21,41 lb)

FREQUENCY RESPONSE CURVE OF 15W600 MADE IN 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

- (3) The peak power rating is based on a 6dB crest factor above the continuous power rating and 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 2,83V sine wave test signal swept between 100Hz and 500Hz with the test specimen mounted in the same enclosure as given for 2 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 1000 W AES power and represent the expected long term parameters after a short period of use.

- (8) Linear Mat. Xmax is calculated as; $(Hvc-Hg)/2 + Hg/4$ where Hvc is the coil depth and Hgis the gap depth.