

15W1200

Key Features

99,5 dB SPL 1W / 1m average sensitivity

100 mm (4 in) Interleaved Sandwich Voice coil (ISV)

850 W AES power handling

Double Silicon Spider (DSS) for improved excursion control and linearity

Double Demodulating Rings (DDR) for lowest distortion and lower power compression

Improved heat dissipation via unique basket design

Weather protected cone and plates for outdoor usage

High Output Low Frequency Transducer



General Description

The 15W1200 is a low frequency loudspeaker which sets a new industry standard in 15" (380 mm) high output transducers. The 15W1200 is intended as the low bass either in a reflex 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.

In its reflex option it's also suited to bass instrument applications - especially 5-string fretless bass guitar.

The high excursion capabilities of the surround and suspension system, in conjunction with the Eighteen Sound Double Silicon Spider (DSS) technology, enable the 15W1200 to achieve high levels of linear travel and maintain full control of the moving mass.

The 15W1200 is fitted with a low profile, carbon fiber reinforced, smooth curvilinear cone carried by a triple roll, polycotton suspension and double silicon spider assembly.

The state-of-the-art voice coil employs our own 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 balanced coil with a uniform distribution of mass and motive energy. This results in an extremely linear motor assembly.

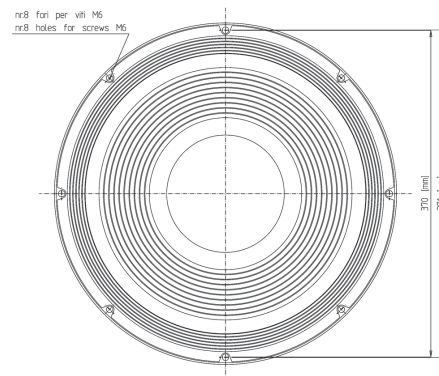
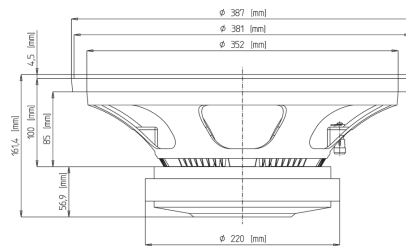
The excellent performance capabilities of this loudspeaker have been further enhanced using Double Demodulating Rings (DDR) designed to dramatically reduce the intermodulation and harmonic distortion and improve the transient response.

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 FEA CAD resource to maximize the flux density within the voice coil gap.

An exclusive cone treatment process designed to improve the 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 15W1200 to be used outdoors and in marine environments.

0221584110 8ohm



FERRITE LF-MB-MF TRANSDUCERS

info@eighteensound.com

www.eighteensound.com



15W1200

High Output Low Frequency Transducer

GENERAL SPECIFICATIONS

| | |
|-------------------------------|---------------------------------|
| NOMINAL DIAMETER | 380 mm (15 in) |
| RATED IMPEDANCE | 8 Ohm |
| AES POWER | 850 W |
| PROGRAM POWER (1) | 1200 W |
| PEAK POWER (2) | 6000 W |
| SENSITIVITY (3) | 99,5 dB |
| FREQUENCY RANGE (4) | 43 ÷ 4100 Hz |
| POWER COMPRESSION @-10DB (5) | 0,7 dB |
| POWER COMPRESSION @-3DB | 2,5 dB |
| POWER COMPRESSION @FULL POWER | 3,5 dB |
| MAX RECOMM. FREQUENCY | 1800 Hz |
| RECOMM. ENCLOSURE VOLUME | 65 ÷ 130 lt. (2.35 ÷ 4.65 cuft) |
| MINIMUM IMPEDANCE | 7,1 Ohm at 25°C |
| MAX PEAK TO PEAK EXCURSION | 39 mm (1,53 in) |
| VOICE COIL DIAMETER | 100 mm (3,95 in) |
| VOICE COIL WINDING MATERIAL | copper |
| SUSPENSION | Triple roll, Polycotton |
| CONE | Paper, curvilinear |

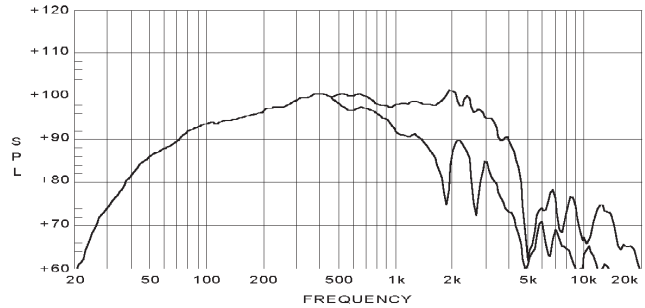
THIELE SMALL PARAMETERS (6)

| | |
|------------------------------------|-----------------------------|
| Fs | 45 Hz |
| Re | 5,5 Ohm |
| Sd | 0,090 sq.mt. (139,5 sq.in.) |
| Qms | 4,1 |
| Qes | 0,27 |
| Qts | 0,25 |
| Vas | 134 lt. (4,73 cuft) |
| Mms | 108 gr. (0,24 lb) |
| BL | 25 Tm |
| Linear Mathematical Xmax (7) | ± 6 mm (±0,24 in) |
| Le (1kHz) | 1,7 mH |
| Ref. Efficiency 1W@1m (half space) | 98,6 dB |

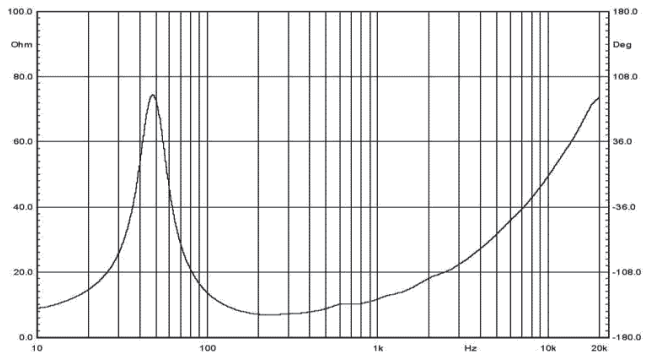
MOUNTING INFORMATION

| | |
|--------------------------------|--|
| 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 | 162 mm (6,38 in) |
| Flange and gasket thickness | 19 mm (0,75 in) |
| Net weight | 12,1 kg (26,7 lb) |
| Shipping weight | 13,2 kg (29,14 lb) |
| CardBoard Packaging dimensions | 405 x 405 x 214 mm (15,94 x 15,94 x 8,43 in) |

FREQUENCY RESPONSE CURVE OF 15W1200 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) Program power rating is measured in 125 lit enclosure tuned at 50Hz using a 40 - 400Hz band limited pink noise signal with 50% duty cycle, applied for 2 hours
- (2) The peak power rating is based on a 10 dB 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.
- (3) 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.
- (4) 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.
- (5) 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.
- (6) 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.
- (7) Linear Math. Xmax is calculated as; $(Hvc-Hg)/2 + Hg/4$ 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.