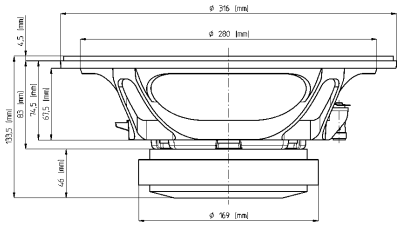
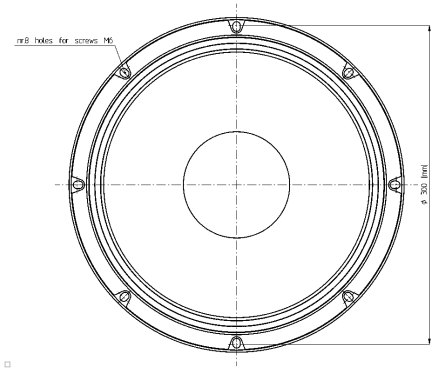
12W600

Low Frequency Transducer

KeyFeatures

96 dB SPL 1W / 1m average sensitivity
75 mm (3 in) Interleaved Sandwich Voice coil (ISV)
450W AES power handling
Weather protected cone and plates for outdoor usage
Excellent transient response
Improved heat dissipation via unique basket design





Description

The 12W600 low frequency transducer meets the specific market requirement for a loudspeaker combining good linearity and efficiency with high power handling capabilities.
Although primarily developed as woofer in compact reflex cabinets, the 12W600 driver's versatile characteristics make it also suitable for bandpass.
The high quality curvilinear cone assures smooth response and exceptional strength with maximum reliability under high mechanical stress. In the same way, the suspension geometry has been carefully designed for superior symmetry, resulting in DC offset free movement in a very low frequency area.
The 75 mm Ø state-of-the-art copper voice coil employs our Interleaved Sandwich Voice coil (ISV). A high strength fiberglas former carries windings on both the outer and inner surfaces. This results in a mass-balanced coil and an extremely linear motor assembly with a reduced tendency for eccentric behavior during high travels.
The ferrite magnetic structure has been optimized using FEA CAD simulation software to maximize the flux density and symmetry in the voice coil gap region and to minimize weight. A new lightweight aluminum basket contributes the excellent weight-to-performance ratio of the transducer.
Due to the increasing use of audio systems at outdoor events, the ability of the 12W600 to perform in adverse, high humidity weather conditions is a clear advantage. This has been achieved thanks to a proprietary water-repellent cone treatment.

Models

Model	Code	Information
0221284220	0221284220	8 Ohm

12W600

Low Frequency Transducer

General Specifications

Nominal Diameter	300 mm (12 in)
Rated Impedance	8 Ohm
AES Power	450 W
Program Power	600 W
Peak Power	1500 W
Sensitivity	96 dB
Frequency Range	48 ÷ 3700 Hz
Power Compression @-10dB	0,8 dB
Power Compression @-3dB	2,3 dB
Power Compression @Full Power	3,1 dB
Max Recomm. Frequency	1400 Hz
Recomm. Enclosure Volume	40 ÷ 100 lt. (1,41 ÷ 3,18 cuft)
Max Peak To Peak Excursion	34 mm (1,34 in)
Voice Coil Diameter	75 mm (2,95 in)
Voice Coil Winding Material	copper

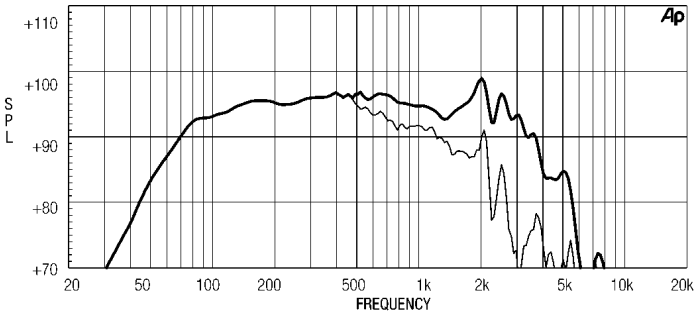
Thiele Small Parameters

Fs	50 Hz
Re	5,5 Ohm
Sd	0,0531 sq.mt. (82,31 sq.in.)
Qms	5,87
Qes	0,316
Qts	0,3
Vas	73 lt. (2,58 cuft)
Mms	55 gr. (0,12 lb)
BL	17,3 Tm
Linear Mathematical Xmax	± 6,5 mm (± 0,26 in)
Le (1kHz)	1,85 mH
Ref. Efficiency 1W@1m (half space)	96,5 dB

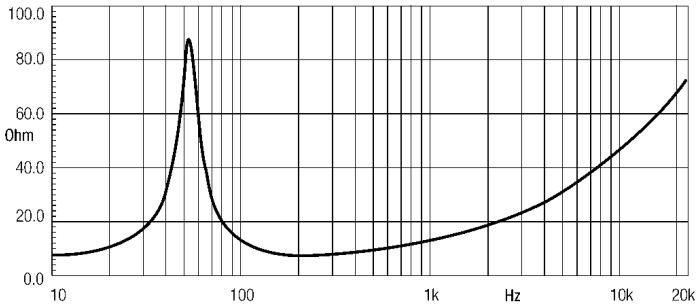
Mounting information

Overall diameter	316 mm (12,44 in)
N. of mounting holes and bolt	8
Mounting holes diameter	7,15 mm (0,28 in)
Bolt circle diameter	296 - 300 mm (11,65 - 11,8 in)
Front mount baffle cutout ø	282 mm (11,1 in)
Rear mount baffle cutout ø	282 mm (11,1 in)
Total depth	133,5 mm (5,25 in)
Flange and gasket thickness	11,5 mm (0,45 in)
Flange and gasket thickness	11,5 mm (0,45 in)
Net weight	5,7 kg (12,58 lb)
Shipping weight	6,5 kg (14,45 lb)
CardBoard Packaging dimensions	332 x 332 x 184 mm (13,07 x 13,07 x 7,24 in)

FREQUENCY RESPONSE CURVE OF 12W600 MADE ON 50 LIT. ENCLOSURE TUNED 60HZ 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 50 lit enclosure tuned 60Hz using a 60 - 2000Hz 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 450 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 Hg is the gap depth.