

ANSI/AMCA Standard 301-22

Methods for Calculating Fan Sound Ratings from Laboratory Test Data

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Air Movement and Control Association International

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Methods for Calculating Fan Sound Ratings from Laboratory Test Data

1. Purpose

This document establishes standard methods for calculating fan sound ratings from laboratory test data.

2. Scope

This standard applies to any fan, if a test standard exists to measure its fan sound power levels.

3. References

The following documents contain provisions that, through specific reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below.

ANSI S3.4-1980 (ASA 37-1980) (R2003), American National Standard Procedure for the Computation of Loudness of Noise, Acoustical Society of America, Melville, NY, USA.

ANSI/AMCA Standard 99-16, Standards Handbook, Air Movement and Control Association International Inc., Arlington Heights, IL, USA.

ANSI/AMCA Standard 210-16, Laboratory Methods of Testing Fans for Aerodynamic Performance Rating, Air Movement and Control Association International Inc., Arlington Heights, IL, USA.

ANSI/AMCA Standard 300-14, Reverberant Room Method for Sound Testing of Fans, Air Movement and Control Association International Inc., Arlington Heights, IL, USA.

ANSI/AMCA Standard 320-13, Laboratory Methods of Sound Testing of Fans Using Sound Intensity, Air Movement and Control Association International Inc., Arlington Heights, IL, USA.

ANSI/ASA S1.42-2020, Design Response of Weighting Networks for Acoustical Measurements, Acoustical Society of America, Melville, NY, USA.

ISO 5136:2003(E), Acoustics — Determination of sound power radiated into a duct by fans and other air-moving devices — In-duct method, International Organization for Standardization, Geneva, Switzerland.

4. Definitions, Symbols and Subscripts

4.1 Definitions

For the purposes of this standard, the definitions given in ANSI/AMCA Standard 99, ANSI/AMCA Standard 210 and ANSI/AMCA Standard 300 apply.

4.2 Units of measure

The primary units used in this standard are The International System of Units, also known as Le Système International d'Unités (SI), with inch-pound (I-P) units given as the secondary reference.