



CHECKLIST: SOUND CATALOGS

CATALOG IDENTIFICATION _____ DATE OF CATALOG _____

This check list should be used in conjunction with the air performance check list.

I. PRODUCT LINES LICENSED FOR SOUND

A. Octave Band and L_{wA} Rating Qualifying Statements

The following are the qualifying statements that shall be used with Sections B and C.

1. Figure 1, Fan Total Sound Testing

"Values shown are for (total L_w or total L_{wA}) sound power levels for:

- Installation Type A: free inlet, free outlet."
- Installation Type B: free inlet, ducted outlet. Ratings include the effects of duct end correction for the outlet duct."
- Installation Type C: ducted inlet, free outlet. Ratings include the effects of duct end correction for the inlet duct."
- Installation Type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction for inlet and outlet ducts."

2. Figure 2, Fan Inlet Sound Testing

"Values shown are for (inlet L_{wi} or inlet L_{wiA}) sound power levels for:

- Installation Type A: free inlet, free outlet."
- Installation Type B: free inlet, ducted outlet."
- Installation Type C: ducted inlet, free outlet. Ratings include the effects of duct end correction."
- Installation Type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction."

3. Figure 3, Fan Outlet Sound Testing

"Values shown are for (outlet L_{wo} or outlet L_{woA}) sound power levels for:

- Installation Type A: free inlet, free outlet."
- Installation Type B: free inlet, ducted outlet. Ratings include the effects of duct end correction."



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Installation Type C: ducted inlet, free outlet."

Installation Type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction."

B. Octave Band Ratings

For a given rotational speed, a full set of octave band values may be presented for various points of rating. If only one set is presented, the value in each octave band shall be the maximum at any point of rating.

The following statement shall be used:

"The sound power level ratings shown are in decibels, referred to 10^{-12} watts, calculated per AMCA International Standard 301."

In addition, the appropriate statement from Section A shall be used to clarify installation type and end reflection.

C. L_wA Rating

The following statement shall be used:

"The A-weighted sound ratings shown have been calculated per AMCA International Standard 301."

In addition, the appropriate statement from Section A shall be used to clarify installation type and end reflection.

D. Fan Sone Rating Qualifying Statements

1. Fan Inlet Sone Rating

For fans rated by a single value (hemispherical sone rating) use the following sentence:

"The sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for:

Installation Type A: free inlet hemispherical sone levels."

Installation type B: free inlet hemispherical sone levels."

Installation type C: ducted inlet hemispherical sone levels. Ratings do not include the effect of duct end correction."

Installation type D: ducted inlet hemispherical sone levels. Ratings do not include the effect of duct end correction."

For fans rated using spherical sone values, use the following sentence:

"The sound ratings shown are for loudness values in spherical sones at 1.5 m (5 ft) in a spherical free field calculated per Annex B of AMCA 311. Values shown are for:

Installation type A: free inlet spherical sone levels."



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- Installation type B: free inlet spherical sone levels.”
- Installation type C: ducted inlet spherical sone levels. Ratings do not include the effect of duct end correction.”
- Installation type D: ducted inlet spherical sone levels. Ratings do not include the effect of duct end correction.”

2. Fan Outlet Sone Rating

For fans rated by a single value (hemispherical sone rating) use the following sentence:

“The sound ratings shown are loudness values in fan sones at a distance of 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for:

- Installation Type A: free outlet hemispherical sone levels.”
- Installation type B: ducted outlet hemispherical sone levels. Ratings do not include the effect of duct end correction.”
- Installation Type C: free outlet hemispherical sone levels.”
- Installation type D: ducted outlet hemispherical sone levels. Ratings do not include the effect of duct end correction.”

E. Octave Band Ratings from In-Duct Tests

For fans rated in eight octave bands from tests in accordance with ANSI/AMCA 330, the following statement shall be used:

“The sound power level ratings are shown in decibels, referred to 10^{-12} watts, in a duct connected to either the inlet or the outlet of the fan, calculated per AMCA Standard 301. Values shown are sound power levels for:

- total fan sound calculated from inlet and outlet tests.”
- the fan inlet.”
- the fan outlet.”

F. Presentation of Sound Values

- For octave band and L_wA ratings, round off the number to the nearest integer.
- Hemispherical sone values less than twenty shall be rounded to one tenth of a sone. Values of twenty or greater shall be rounded to the nearest integer.
- Spherical sone values shall be at a fan static pressure of 25 Pa (0.1 in. wg). Ratings at other fan pressures are optional.



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- Spherical sone values greater than one and a half are rounded to the nearest one half sone. Spherical sone values greater than three tenths and less than or equal to one and a half are rounded to one tenth of a sone. Spherical sone values less than three tenths are rated as "<0.3 Sones".
- Cataloged sound power data shall not be lower than 1 dB less than the data developed from the CRP-8 test data.
- Cataloged hemispherical sone or spherical sone ratings shall not be lower than 1 sone (or 5%, whichever is less) from the value calculated from the sound power level data developed from the CRP-8 test data.

G. A-Weighted Sound Pressure Levels and dBA Ratings

- If A-weighted sound pressure levels or dBA levels are displayed, the details of the calculation shall be shown, and the following statement shall be used:

“dBA levels are not licensed by AMCA International.”