



NEWS RELEASE

AMCA International

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The International Authority on Air System Components Since 1917

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FOR IMMEDIATE RELEASE

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AMCA INTERNATIONAL ANNOUNCES REVISION OF AMCA PUBLICATION 211 (*CERTIFIED RATINGS PROGRAM, PRODUCT RATING MANUAL FOR FAN AIR PERFORMANCE*)

ARLINGTON HEIGHTS, Ill., February 25, 2022—Air Movement and Control Association (AMCA) International, Inc. announces the publication of a revised AMCA Publication 211-22, (*Certified Ratings Program, Product Rating Manual for Fan Air Performance*, replacing AMCA 211-13).

This edition of AMCA Publication 211, *Certified Ratings Program, Product Rating Manual for Fan Air Performance*, incorporates many major changes to the AMCA International Certified Ratings Program for fans. Many of the changes resulted from experiences gained over the past several years with some of the changes originating with the AMCA International's Fan Committee. Other changes were developed to support and anticipate foreseeable government regulations. All changes were made keeping the needs of the industry in mind along with the needs of the public.

AMCA Publication 211, has been in-committee since October 2018. The last revision focused on the introduction of FEI certification into 211. The utility and adoption of FEI is a key strategy for AMCA, with pending regulation referencing this efficiency metric.

This edition of AMCA 211 contains major changes that strategically align AMCA members with their customers and various other regulatory bodies. A summary of these major changes, why they were made and their impact on licensees of the AMCA International Certified Rating Program follows:

1. Changes to AMCA 211-18 check Test Tolerances in Section 10:

- **What changed:**

- i. Check test tolerances will be applied to each test point individually as opposed to the entire fan curve at once.

- ii. Each test point will individually have a +/- 5% tolerance on speed to achieve the Point of Rating (POR) while not exceeding 7.5% tolerance on the POR power for shaft-to-air ratings and 10% tolerance on POR power for wire-to-air ratings.

- **Reason for change:**

- . Provides consistency with AHRI 430 tolerances as both are closely aligned.
- i. Aligns testing validation with field installation and application of fans.
- ii. Regulators will test performance to a Point of Rating, POR (duty point, design point) of airflow, power consumption, and static or total pressure.
- iii. Customers in the field can fine-tune performance using speed change (VFD or sheave/belts) to achieve desired POR.
- iv. With the current check test tolerances, a certified fan (if not certified for efficiency) could have up to a 13% lower than published efficiency in its performance rating and can still pass a test. It was understood in the committee that pending state and federal fan-efficiency regulations would require stricter check test tolerances. The intent is that the new changes will closely align with the acceptance of regulators and they will therefore reference this standard and bring stronger reliability to AMCA's Certified Ratings Program.
- v. Open market test tolerances are aligned with the same methodology, but at a greater tolerance than if supplied directly by the manufacturer.
- vi. During its approval phase, some concerns were shown for products that have been certified over many years without any performance issues (including check tests). These fans may only need a catalog change to meet the new requirements. For currently certified fans, such catalog changes will not be required for three years after final Board approval of this revised publication so that member companies may comply. For newly certified products, the requirements would go into effect the first of the month after final Board approval.
- vii. During a check test of a fan certified prior to Final Approval of AMCA 211, if a fan fails using the new check test tolerance and would have passed using the old check test tolerance, and the licensee chooses to re-catalog, the licensee shall re-catalog based on the check test performance. The fan will then be called with normal periodicity, i.e. within 36 months. The normal requirement of a check test within 1 year shall be waived.

2. **New Annex I on Speed and Diameter Interpolation:**

• **What changed:**

- i. The smallest size and lowest speed shall be tested. Fan laws can only be used for 'upward' speed and diameter scaling when one fan speed is tested.
- ii. Diameter and speed interpolation from base test to scaled tests are allowed for catalog data when multiple fan speeds are tested.

• **Reason for change:**

- i. To provide better accuracy for low-speed fan performance.
- ii. Interpolation better reflects the accuracy of smooth efficiency transitions from small to large size fans rather than 'step' transitions that were resulting from pure Fan laws calculations.
- iii. All rating methods were consistently applied for wire-to-air and shaft-to-air performance.

3. **Alternate Test Determination Methods (ATDMs) in Section 8.7:**

• **What changed:**

- i. This method allows the extension of the rating factor approach to various pressure loss accessories of fan-like hoods, stack caps, dampers, filters, nozzles, evasés etc. Rating factors shall be verified via precertification tests for 'non-tested' configurations.

• **Reason for change:**

- i. This approach minimizes the testing burden for manufacturers by utilizing advanced modeling and simulation techniques in fan design.

4. **Testing and Calibrating Power Drive Systems (PDS) for air performance / FEI certification in Section 10.6:**

• **What changed:**

- i. Requirements for testing PDS have been added to the CRP.

• **Reason for change:**

- i. Ultimately this total system energy consumption is what the market, our customers and regulators seek.
- ii. This feature enables fan manufacturers to mix and match the performance of PDS (wire-to-shaft) with their fans (shaft-to-air) to create Certified Ratings of Fan/Motor/Drive Systems that could exceed default AMCA 207/208 performance.
- iii. If Sound Power Levels (Lw) are acquired for a PDS, they can be also combined with fan Lwo, Lwi to determine and certify noise levels for complete fans with motors and drives.

5. **Large Diameter Ceiling Fan (LDCF) modification to comply with revised US Federal Regulations in Section 8.3.9.3 and 9.11**
6. **Added Jet Fan and LDCF seals to better differentiate the distinct types of fan rating programs.**
7. **Clarified the definition of a “product line” (included examples) and added a definition of a “model” in Section 3.**
 - **What changed:**
 - i. Specifically added information regarding product line differentiation for propeller fans.
 - **Reason for change:**
 - i. This clarification may cause some propeller fan product lines to split into more than one product line. This change will help level the playing field for all member companies.
 - ii. All product nomenclature, marketing literature and selection program implementation shall be up to the discretion of the fan manufacturers.
 - iii. The ‘product line’ interpretation by AMCA shall go into effect three (3) years after Board approval of this revised publication. This change may affect member companies’ catalogs, selection programs, the number of products called for check tests, and check test scheduling. The three (3) year period will allow member companies to assess the business impact for compliance.
8. **Deleted certification of efficiency due to its very limited usage since its inception in 2005. Adoption of FEI by regulatory bodies negates the need for efficiency certification.**
9. **Manufacturers shall be permitted to assume the compressibility ratio is equal to 1 if the fan total pressure is less than 2,500 Pa (10 in. wg) at any fan air density as outlined in Annex I.**

The PDF version of the publication is [available through the AMCA store](#). If you have any questions, please direct them to Joe Brooks, Director of Publications & Standards (jbrooks@amca.org) or Shruti Kohli-Bhargava, Manager of Publications & Standards (shrutik@amca.org).

About AMCA International

Air Movement and Control Association (AMCA) International Inc. is a not-for-profit association of manufacturers of fans, dampers, louvers, air curtains, and other air-system components for commercial HVAC, industrial-process, and power-generation applications. With programs such as certified ratings, laboratory accreditation, verification of compliance, and international-standards development, its mission is to advance the health, growth, and integrity of the air-movement-and-control industry consistent with the interests of the public. For more information about AMCA, visit www.amca.org.