

Guideline Specifications

for AMCA-Certified Products

An AMCA International White Paper

Air Movement and Control Association (AMCA) International Inc. 30 W. University Drive Arlington Heights, IL 60004-1893 USA

www.amca.org



Asia AMCA Sdn Bhd No. 7, Jalan SiLC 1/6, Kawasan Perindustrian SiLC Nusajaya, Mukim Jelutong, 79200 Nusajaya, Johor, Malaysia www.asiaamca.org Send comments and suggestions to Scott Arnold, manager of industry content, AMCA International, sarnold@amca.org.

Guideline Specifications for AMCA-Certified Products

ABSTRACT

Most air-system specifications are written ineffectively with regard to certification, leaving the door open for non-certified products to be installed when certified products were intended. Based on feedback from engineers, AMCA simplified its guideline specifications.



A fan is prepared for testing in the laboratory at AMCA International headquarters in Arlington Heights, III.

Through its globally recognized Certified Ratings Program (CRP), Air Movement and Control Association (AMCA) International Inc. tests and rates 24 types of air-system components, from dampers to duct silencers, axial fans to air curtains. To specifiers of these products, AMCA certification is assurance a product line conforms to AMCA standards and requirements and that published performance data are accurate.

Through its free specification-review service, however, AMCA is finding that most air-system specifications are written ineffectively with regard to certification, leaving the door open for non-certified products to be installed when certified products were intended. Based on feedback from specifying engineers, AMCA simplified its guideline specifications, reducing paragraph-long statements to single sentences. Engineers are encouraged to incorporate this new and more efficient language into their specifications.

FANS

Agricultural Fans

- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for CFM/Watt and Air Performance."
- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for FEI (Fan Energy Index)."

Air-Circulating Fans

- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance."
- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for FEI (Fan Energy Index)."

Air-Curtain Units

- "All air-curtain units shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance."
- "All air-curtain units shall be certified to bear the AMCA Certified Ratings Program seal for Sound and Air Performance."

Axial Fans, Ceiling Ventilators, Centrifugal Fans, Mixed-Flow Fans, Power Roof Ventilators, and Propeller Fans

- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance."
- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for Sound and Air Performance."
- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance and Efficiency."
- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for Air and Sound Performance and Efficiency."
- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance and FEG (Fan Efficiency Grade)."
- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for Sound and Air Performance and FEG (Fan Efficiency Grade)."
- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for FEI (Fan Energy Index)."

Axial Impellers

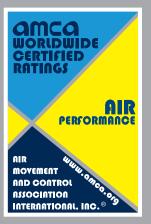
"All axial impellers shall be certified to bear the AMCA Certified

ABOUT THE AMCA SEAL

The hallmark of the AMCA Certified Ratings Program (CRP) is the AMCA seal, which can be affixed to equipment and used in catalogs and sizing/selection software.

Manufacturers whose products are certified to bear the AMCA seal are not required to display it. Thus, it is best to specify that products "shall be certified to bear" an AMCA seal.

CRP seals are applied according to very specific rules. For example, a seal can be associated only with a product currently certified to bear it and cannot be displayed on the cover of a catalog containing both certified and non-certified products. This and other rules are contained within the CRP publications listed in the references section of this white paper.





Ratings Program seal for Air Performance."

"All fans shall be certified to bear the AMCA Certified Ratings Program seal for FEI (Fan Energy Index)."

Induced-Flow Fans

- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for Induced Flow Fan Air Performance."
- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for Induced Flow Fan Air and Sound Performance."
- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for Induced Flow Fan Air Performance and FEG (Fan Efficiency Grade)."
- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for Induced Flow Fan Air and Sound Performance and FEG (Fan Efficiency Grade)."
- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for FEI (Fan Energy Index)."

Jet Tunnel Fans

- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for Jet Fan Air Performance."
- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for Jet Fan Air and Sound Performance."
- "All fans shall be certified to bear the AMCA Certified Ratings Program seal for FEI (Fan Energy Index)."

Large-Diameter Ceiling Fans

"All fans shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance."

Positive-Pressure Ventilators

 "All positive-pressure ventilators shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance."

DAMPERS

- "All dampers shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance."
- "All dampers shall be certified to bear the AMCA Certified Ratings Program seal for Air Leakage and Air Performance."
- "All dampers shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance and Efficiency."
- "All dampers shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance, Efficiency, and Air Leakage."

LOUVERS

- "All louvers shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance."
- "All louvers shall be certified to bear the AMCA Certified Ratings Program seal for Sound and Air Performance."
- "All louvers shall be certified to bear the AMCA Certified Ratings Program seal for Water Penetration and Air Performance."
- "All sand louvers shall be tested in accordance with ANSI/AMCA Standard 500-L and be certified to bear the AMCA Certified Ratings Program seal for Air Performance and Wind Driven Sand in accordance with AMCA Publication 511."
- "All louvers shall be certified to bear the AMCA Certified Ratings

Program seal for Air Performance and Wind Driven Rain."

- "All louvers shall be certified to bear the AMCA Certified Ratings Program seal for Water Penetration, Air Performance, and Wind Driven Rain."
- "All louvers shall be certified to bear the AMCA Certified Ratings Program seal for Water Penetration, Sound, and Air Performance."
- "All louvers shall be certified to bear the AMCA Certified Ratings Program seal for Air Leakage."

AIRFLOW-MEASUREMENT STATIONS

"All airflow-measurement stations shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance."

PACKAGED EQUIPMENT

Energy-Recovery Ventilators

"All energy-recovery ventilators shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance."

Evaporative Coolers

- "All evaporative coolers shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance."
- "All evaporative coolers shall be certified to bear the AMCA Certified Ratings Program seal for Sound and Air Performance."

Single-Room Air Handlers

- "All single-room air handlers shall be certified to bear the AMCA Certified Ratings Program seal for Air Performance."
- "All single-room air handlers shall be certified to bear the AMCA Certified Ratings Program seal for Sound and Air Performance."

DUCTS

Spiral Ducts

"All spiral ducts shall be certified to bear the AMCA Certified Ratings Program seal for Air Leakage."

Prefabricated Duct Silencers

"All acoustical duct silencers shall be certified to bear the AMCA

Certified Ratings Program seal for Sound and Air Performance."

REFERENCED PUBLICATIONS AND STANDARDS

The following publications can be downloaded free of charge from the AMCA International store at www.amca.org/store:

- AMCA Publication 11, Certified Ratings Program Operating Manual
- AMCA Publication 211, Certified Ratings Program Product Rating Manual for Fan Air Performance.
- AMCA Publication 311, Certified Ratings Program Product Rating Manual for Fan Sound Performance.
- AMCA Publication 511, Certified Ratings Program Product Rating Manual for Air Control Devices.
- AMCA Publication 611, Certified Ratings Program—Product Rating Manual for Airflow Measurement Stations.
- AMCA Publication 1011, Certified Ratings Program—Product Rating Manual for Acoustical Duct Silencers.

The following standards are available for purchase from the AMCA International store at www.amca.org/store:

- ANSI/AMCA Standard 99, Standards Handbook.
- ANSI/AMCA Standard 204, Balance Quality and Vibration Levels for Fans.
- ANSI/AMCA Standard 205, Energy Efficiency Classification for Fans.
- ANSI/AMCA Standard 207, Fan System Efficiency and Fan System Input Power Calculation.
- ANSI/AMCA Standard 210/ASHRAE Standard 51, Laboratory Methods of Testing Fans for Certified Aerodynamic Performance Rating.
- ANSI/AMCA Standard 220, Laboratory Methods of Testing Air Curtain Units for Aerodynamic Performance Rating.
- ANSI/AMCA Standard 230, Laboratory Methods of Testing Air Circulating Fans for Rating and Certification.
- ANSI/AMCA Standard 240, Laboratory Methods of Testing Positive Pressure Ventilators for Aerodynamic Performance Rating.



Damper-leakage test.

- ANSI/AMCA Standard 250, Laboratory Methods of Testing Jet Tunnel Fans for Performance.
- ANSI/AMCA Standard 260, Laboratory Methods of Testing Induced Flow Fans for Rating.
- ANSI/AMCA Standard 300, Reverberant Room Method for Sound Testing of Fans.
- ANSI/AMCA Standard 301, Methods for Calculating Fan Sound Ratings From Laboratory Test Data.
- ANSI/AMCA Standard 500-D, Laboratory Methods of Testing Dampers for Rating.
- ANSI/AMCA Standard 500-L, Laboratory Methods of Testing Louvers for Rating.
- ANSI/AMCA Standard 550, Test Method for High Velocity Wind Driven Rain Resistant Louvers.
- ANSI/AMCA Standard 610, Laboratory Methods of Testing Airflow Measurement Stations for Performance Rating.



Asia AMCA office and laboratory
No. 7, Jalan SiLC 1/6, Kawasan
Perindustrian SiLC Nusajaya,
Mukim Jelutong, 79200 Nusajaya, Johor, Malaysia



AMCA International office and laboratory 30 W. University Drive Arlington Heights, IL 60004-1893 USA

OTHER CRP WHITE PAPERS

Available at www.amca.org/whitepapers:



covered by the CRP.

AN INTRODUCTION TO THE AMCA CERTIFIED RATINGS PROGRAM – Describes how the AMCA Certified Ratings Program (CRP) works, explains how to properly specify AMCA-certified products for air systems, and maps seals/labels, publications, and test standards to the 24 products



practical examples.

HOW TO ENSURE AMCA-CERTIFIED PRODUCTS GET INSTALLED—This white paper describes what building-industry professionals need to know to specify an AMCA-certified product and ensure the product gets installed. Included are a handy step-by-step checklist and several

AMCA ONLINE RESOURCES

AMCA International headquarters and laboratory www.amca.org

Asia AMCA offices and testing laboratory **www.asiaamca.org**

AMCA white papers

www.amca.org/whitepapers

CRP-related publications (no cost) and standards (cost) **www.amca.org/store**

Searchable database of AMCA-certified products www.amca.org/certified-listed/cpsearch.php



30 W. UNIVERSITY DRIVE ARLINGTON HEIGHTS, IL 60004-1893 USA +1 847-394-0150