



How to Ensure AMCA-Certified Products Get Installed

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

This white paper is available to download at no cost at www.amca.org/whitepapers

How to Ensure AMCA-Certified Products Get Installed

ABSTRACT

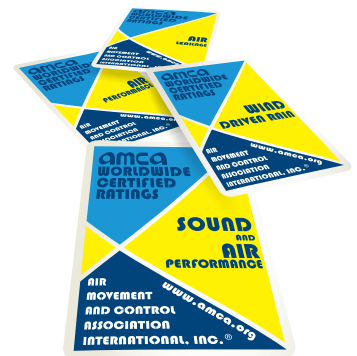
This white paper explains what building-industry professionals need to know to properly specify an AMCA-certified product and then ensure that product gets installed. Included are a step-by-step checklist and several practical examples.

AMCA CERTIFIED RATINGS PROGRAM

Air Movement and Control Association (AMCA) International's Certified Ratings Program (CRP) is a globally recognized third-party program that assures not only that a product line has been tested and rated in conformance with AMCA standards and requirements, but that published performance ratings are accurate and, thus, reliable.

AMCA-CERTIFIED-PRODUCT TYPES

The first and perhaps most obvious step in specifying an AMCA-certified product is to verify a product is of a type AMCA certifies.



AMCA Certified Ratings Program seals.

STEP 1: VERIFY PRODUCT IS OF A TYPE AMCA CERTIFIES

- Acoustic duct silencers
- Agricultural fans
- Air circulator fans
- Air-curtain units
- Airflow-measurement stations
- Axial fans
- Axial impellers
- Ceiling ventilators
- Centrifugal fans
- Dampers
- Energy-recovery ventilators
- Evaporative coolers
- Gravity ventilators
- Induced-flow fans
- Jet-tunnel fans
- Large-diameter ceiling fans
- Louvers
- Mixed-flow fans
- Positive-pressure ventilators
- Power roof ventilators
- Propeller fans
- Single-room air handlers
- Spiral duct
- Transverse duct connectors

FINDING AMCA-CERTIFIED PRODUCTS

The most reliable means of finding AMCA-certified products is the database at http://bit.ly/CRP_database. If you select products based on manufacturer literature, it is good practice to verify certifications are current by checking the database.

AMCA's online database is searchable by:

- Company name
- Product type
- Country
- Certification type

AMCA offers 14 certifications through the CRP:

- Acoustic Duct Silencer
- Air Leakage
- Air Performance
- Airflow Measurement Station
- CFM per Watt
- Circulating Fan
- Efficiency
- FEG (fan efficiency grade)
- Induced Flow Fan
- Positive Pressure Ventilator
- Sound
- Water Penetration
- Wind Driven Rain
- Wind Driven Sand

If, for example, you are looking for an AMCA-certified induced-flow fan, first search the online database by certification type, and then review products and literature by manufacturer (figures 1 and 2).

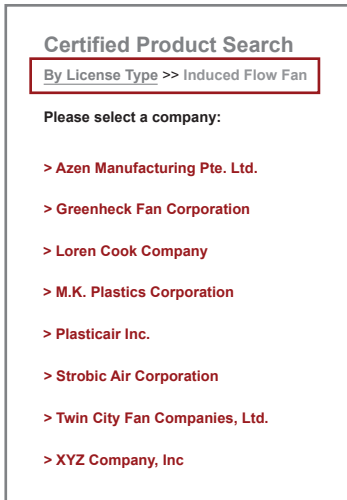


FIGURE 1. To find a specific type of AMCA-certified product, search the online database by certification type.

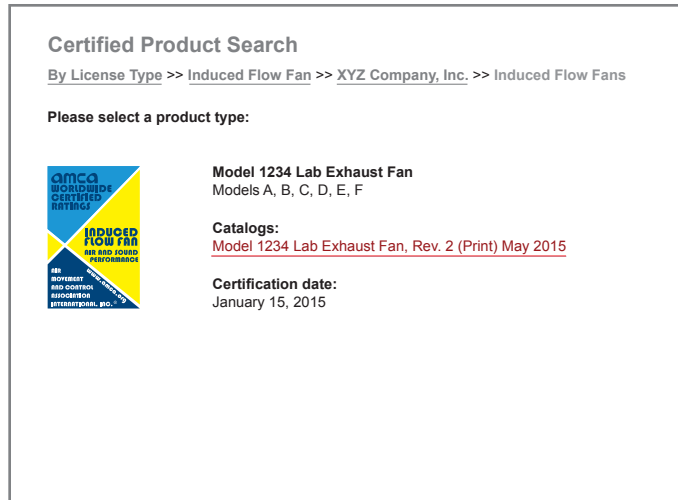


FIGURE 2. After searching by certification type, select a manufacturer to review products. Click on a catalog link to review performance.

STEP 2: FIND AMCA-CERTIFIED PRODUCTS

- Search for certified products in AMCA's online database
or
- Identify AMCA-certified products in manufacturer literature and verify certification in AMCA's online database

VERIFYING CERTIFIED-PERFORMANCE PARAMETERS

It is important to note that for a general certification type, such as sound, a product may be certified for only certain parameters. For example, a fan may be certified to display the AMCA sound-and-air-performance seal, but be certified for only inlet A-weighted sound power (LwA) and air, not hemispherical sones or octave bands. Or, a louver may be certified to display the AMCA water-penetration-and-air-performance seal, but be certified for only intake pressure drop and water penetration, not exhaust pressure drop. To verify specific certified parameters, view approved manufacturer literature found or referenced in AMCA's online database.

STEP 3: VERIFY CERTIFIED-PERFORMANCE PARAMETERS

- View approved manufacturer literature found or referenced in AMCA's online database

WRITING SPECIFICATIONS

Once an AMCA-certified product is selected and the performance parameters in need of certification are verified, the next step is to write a product specification that will withstand the challenges of plan review and the ever-present threat of inappropriate substitution.

Avoid creating a specification that lists a particular product. Instead, create one that lists requirements for how a product type must perform.

To ensure a specification clearly requires an AMCA-certified product, include statements similar to those for a fan below. Reference the Table 1 excerpt in Figure 3, or reference the full Table 1 for publication and standard references by product type.

- Include AMCA Publication 11, *Certified Ratings Program Operating Manual*, in your specification. For example:

Fan(s) shall comply with AMCA Publication 11 ...

- Include the AMCA publication referenced in the “CRP Publications” column of Table 1 (Figure 3) for your product. For example:

... and bear the AMCA Certified Ratings Program seal for air performance in compliance with AMCA Publication 211 and sound performance in compliance with AMCA Publication 311.

- Include the appropriate standards found in the “Test/Rating Standards” column of Table 1 (Figure 3) for your product. For example:

Induced-flow fans shall be tested for air performance in compliance with AMCA Standard 260, tested for sound performance in compliance with AMCA Standard 300, and rated for energy efficiency in compliance with AMCA Standard 205.

Products	Certification Types	CRP Publications	Test/Rating Standards
<ul style="list-style-type: none"> ■ Induced-flow fans 		<ul style="list-style-type: none"> ■ AMCA Publication 211, <i>Certified Ratings Program—Product Rating Manual for Fan Air Performance</i> ■ AMCA Publication 311, <i>Certified Ratings Program—Product Rating Manual for Fan Sound Performance</i> 	<ul style="list-style-type: none"> ■ AMCA Standard 205, <i>Energy Efficiency Classification for Fans</i> ■ ANSI/AMCA Standard 260, <i>Laboratory Methods of Testing Induced Flow Fans for Rating</i> ■ ANSI/AMCA Standard 300, <i>Reverberant Room Method for Sound Testing of Fans</i>

FIGURE 3. Excerpt from Table 1. The full table begins on Page 8.

Important: The following language requires clarification or should be avoided in specifications:

- “Tested in accordance with ...”
A product that was tested in accordance with an AMCA standard is not necessarily an AMCA-certified product. To avoid the possibility of substitution with an uncertified product, be sure to reference compliance with an AMCA 11-series publication.
- “Tested in an AMCA or AMCA-accredited laboratory”
Again, this language provides no assurance a product is certified. Do not use this language in your specification.

CAVEAT

Even for products that cannot be certified, such as custom fans, or are outside the scope of the AMCA CRP, testing in an AMCA-accredited laboratory in accordance with applicable AMCA standards is a valid requirement to have in specifications, as it means manufacturers have done all they can to ensure the integrity of their product ratings.

For more information about writing specifications for AMCA-certified products, see the white paper “Guideline Specifications for Selected AMCA-Certified Products” (www.amca.org/resources/whitepapers.php).

STEP 4: WRITE A SUBSTITUTION-PROOF SPECIFICATION

- ❑ Write a performance specification; do not flat-spec a specific product
- ❑ Include the AMCA publication referenced in the “CRP Publications” column in Table 1
- ❑ Include the appropriate standard(s) from the “Test/Rating Standards” column in Table 1
- ❑ Do not include “tested in accordance with ...” without referencing compliance with an AMCA 11-series publication
- ❑ Do not include “tested in an AMCA or AMCA-accredited laboratory”

VERIFY THE AUTHENTICITY OF CERTIFICATION

The process of designing and constructing a building is long and complex, with things changing along the way: Products get packaged with other products; substitutions happen. From the time products are specified to the time they are procured, installed, and commissioned, building-industry professionals need to ensure there is no elimination of AMCA certification requirements and no substitution with uncertified products.

The goal of the AMCA certification program is to ensure air-movement and control products perform as stated in manufacturer literature. To verify a product is indeed AMCA-certified:

COMPARE THE ACTUAL PRODUCT TO THE PRODUCT IN THE SPECIFICATION

At submittal, installation, and commissioning, verify the selected product matches the product specification.

VERIFY THE PRODUCT IS IN AMCA'S ONLINE CERTIFIED-PRODUCTS DATABASE

Go to AMCA's online certified-products database and search by company name, product type, country, or certification type.

VERIFY THE PRODUCT/MANUFACTURER IS NOT IN AMCA'S ONLINE CRP-VIOLATIONS DATABASE

Go to the “Violations of the CRP” page on AMCA's website (http://bit.ly/CRP_Violations) to see lists of enforced certification withdrawals, program-violation notices, and non-certified products.

VERIFY THE AMCA SEAL IS CORRECT

Manufacturers whose products are certified to bear the AMCA seal are not required to display it. If a product bears the AMCA seal, refer to Table 1 to verify the seal matches the certification requirement identified in the product specification. A printed seal on product packaging does not indicate AMCA certification.

VERIFY THE AMCA SEAL IS AUTHENTIC

Do not assume an AMCA seal affixed to a product is real; a number of counterfeit seals have been found in the field. Manufacturers are not authorized to print their own seals for use on physical products; seals must be purchased directly from AMCA, so AMCA can ensure they are being procured for approved (certified) products. Use Figure 4 and Table 1 to verify the authenticity of seals found in the field.



FIGURE 4. Authentic and counterfeit AMCA seals.

VERIFY THE PRODUCT AND COMPANY NAMES MATCH THOSE ON THE AMCA CERTIFICATION

If an AMCA-certified product is sold to and renamed by another manufacturer, the renamed product must have its own AMCA certification to ensure product performance. Verify AMCA-certified products by name in AMCA’s online database.


BE ON THE LOOKOUT FOR MISLEADING REPRESENTATIONS IN PRODUCT LITERATURE

An AMCA seal can be used only in direct association with a certified product. It cannot, for example, be placed on the cover of a brochure that includes both certified and uncertified products. This is a strict requirement that helps to avoid misrepresentation and confusion. The best practice is to reference approved product literature in AMCA’s online database.

A final note: AMCA's member logo does not indicate certification; it merely signifies membership in AMCA. To avoid confusion, AMCA prohibits use of its member logo in documents containing product performance data.

"Made in accordance with" is not the same as AMCA-certified and could be misleading.

Air Flow Louver Model XX 000.
 The ratings shown are based on tests and procedures made in accordance with AMCA standard 500-L. The actual test results of water penetration and air performance may vary (+/-10%) depending on the actual application. Free area calculations are (+/-5%)
 Unit test size: 48" x 48"
 (Ratings reflect without the bird screen)



AMCA prohibits use of its member logo with product performance data because it may create the impression a product is AMCA-certified when, in fact, it is not.

WIND DRIVEN RAIN PERFORMANCE

1m x 1m Test Size	29 mpm Wind Velocity @ 3 in./hr. Rainfall Rate	
Core Velocity	Water Pen. Effectiveness	Water Pen. Classification
0 fpm	-	A
99 fpm	99.3	A
195 fpm	98.6	B
295 fpm	96.3	B
390 fpm	95.0	B
490 fpm	92.0	C
590 fpm	89.0	C
675 fpm	87.2	C

FIGURE 5. This image is from a manufacturer's product catalog. The model number was disguised for this illustration.

STEP 5: VERIFY THE AUTHENTICITY OF CERTIFICATION

- Compare the actual product to the product in the specification
- Verify the product is in AMCA's online certified-products database
- Verify the product/manufacturer is not in AMCA's online CRP-violations database
- Verify the AMCA seal is correct
- Verify the AMCA seal is authentic
- Verify the product and company names match those on the AMCA certification

CONCLUSION






There is significant value in the ability to specify a building product backed with independently verified performance data. Given that this benefit is available with many air-movement and control products, it makes sense not only to specify a certified product, but to ensure the product actually gets installed. Specifying AMCA-certified products and then carefully verifying product selection throughout design and construction will ensure the products perform as described and as expected.

TABLE 1. Certification types, publications, and test standards associated with the 24 products covered by the AMCA CRP.

Products	Certification Types	CRP Publications	Test/Rating Standards
<ul style="list-style-type: none"> ■ Agricultural fans ■ Axial fans ■ Axial impellers ■ Ceiling ventilators ■ Centrifugal fans ■ Energy-recovery ventilators ■ Evaporative coolers ■ Jet-tunnel fans ■ Mixed-flow fans ■ Power roof ventilators ■ Propeller fans ■ Single-room air handlers 		<ul style="list-style-type: none"> ■ AMCA Publication 211, <i>Certified Ratings Program—Product Rating Manual for Fan Air Performance</i> ■ AMCA Publication 311, <i>Certified Ratings Program—Product Rating Manual for Fan Sound Performance</i> 	<ul style="list-style-type: none"> ■ AMCA Standard 205, <i>Energy Efficiency Classification for Fans</i> ■ ANSI/AMCA Standard 210, <i>Laboratory Methods of Testing Fans for Certified Aerodynamic Performance Rating</i> ■ ANSI/AMCA Standard 250, <i>Laboratory Methods of Testing Jet Tunnel Fans for Performance</i> ■ ANSI/AMCA Standard 300, <i>Reverberant Room Method for Sound Testing of Fans</i> ■ ANSI/AMCA Standard 320, <i>Laboratory Method of Sound Testing of Fans Using Sound Intensity</i> ■ ISO 13347-3, <i>Industrial Fans—Determination of Fan Sound Power Levels Under Standardized Laboratory Conditions—Part 3: Enveloping Surface Methods</i> ■ ISO 5801, <i>Fans—Performance Testing Using Standardized Airways</i>
<ul style="list-style-type: none"> ■ Air circulator fans ■ Large-diameter ceiling fans 		<ul style="list-style-type: none"> ■ AMCA Publication 211 	<ul style="list-style-type: none"> ■ ANSI/AMCA Standard 230, <i>Laboratory Methods of Testing Air Circulating Fans for Rating and Certification</i>
<ul style="list-style-type: none"> ■ Air-curtain units 		<ul style="list-style-type: none"> ■ AMCA Publication 211 ■ AMCA Publication 311 	<ul style="list-style-type: none"> ■ ANSI/AMCA Standard 220, <i>Laboratory Methods of Testing Air Curtains for Aerodynamic Performance Rating</i> ■ ANSI/AMCA Standard 300
<ul style="list-style-type: none"> ■ Induced-flow fans 		<ul style="list-style-type: none"> ■ AMCA Publication 211 ■ AMCA Publication 311 	<ul style="list-style-type: none"> ■ AMCA Standard 205 ■ ANSI/AMCA Standard 260, <i>Laboratory Methods of Testing Induced Flow Fans for Rating</i> ■ ANSI/AMCA Standard 300
<ul style="list-style-type: none"> ■ Positive-pressure ventilators 		<ul style="list-style-type: none"> ■ AMCA Publication 211 	<ul style="list-style-type: none"> ■ ANSI/AMCA Standard 240, <i>Laboratory Methods of Testing Positive Pressure Ventilators for Aerodynamic Performance Rating</i>
<ul style="list-style-type: none"> ■ Airflow-measurement stations 		<ul style="list-style-type: none"> ■ AMCA Publication 611, <i>Certified Ratings Program—Product Rating Manual for Airflow Measurement Stations</i> 	<ul style="list-style-type: none"> ■ ANSI/AMCA Standard 610, <i>Laboratory Methods of Testing Airflow Measurement Stations for Performance Rating</i>

Table 1 continued on next page

Table 1 continued from previous page

Products	Certification Types	CRP Publications	Test/Rating Standards
<ul style="list-style-type: none"> ■ Dampers 		<ul style="list-style-type: none"> ■ AMCA Publication 511, <i>Certified Ratings Program—Product Rating Manual for Air Control Devices</i> 	<ul style="list-style-type: none"> ■ ANSI/AMCA Standard 500-D, <i>Laboratory Methods of Testing Dampers for Rating</i>
<ul style="list-style-type: none"> ■ Louvers 		<ul style="list-style-type: none"> ■ AMCA Publication 511 	<ul style="list-style-type: none"> ■ ANSI/AMCA Standard 500-L, <i>Laboratory Methods of Testing Louvers for Rating</i> ■ ASTM E90, <i>Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements</i>
<ul style="list-style-type: none"> ■ Gravity ventilators 		<ul style="list-style-type: none"> ■ AMCA Publication 511 	<ul style="list-style-type: none"> ■ ANSI/AMCA Standard 500-L
<ul style="list-style-type: none"> ■ Spiral duct ■ Transverse duct connectors 		<ul style="list-style-type: none"> ■ AMCA Publication 511 	<ul style="list-style-type: none"> ■ ANSI/ASHRAE/SMACNA Standard 126, <i>Methods of Testing HVAC Air Ducts</i>
<ul style="list-style-type: none"> ■ Acoustic duct silencers 		<ul style="list-style-type: none"> ■ AMCA Publication 1011, <i>Certified Ratings Program—Product Rating Manual for Acoustical Duct Silencers</i> 	<ul style="list-style-type: none"> ■ ASTM E477, <i>Standard Test Method for Laboratory Measurements of Acoustical and Airflow Performance of Duct Liner Materials and Prefabricated Silencers</i>

CHECKLIST TO ENSURE AMCA-CERTIFIED PRODUCTS GET INSTALLED

STEP 1: VERIFY PRODUCT IS OF A TYPE AMCA CERTIFIES

- Acoustic duct silencers
- Agricultural fans
- Air circulator fans
- Air-curtain units
- Airflow-measurement stations
- Axial fans
- Axial impellers
- Ceiling ventilators
- Centrifugal fans
- Dampers
- Energy-recovery ventilators
- Evaporative coolers
- Gravity ventilators
- Induced-flow fans
- Jet-tunnel fans
- Large-diameter ceiling fans
- Louvers
- Mixed-flow fans
- Positive-pressure ventilators
- Power roof ventilators
- Propeller fans
- Single-room air handlers
- Spiral duct
- Transverse duct connectors

STEP 2: FIND AMCA-CERTIFIED PRODUCTS

- Search for certified products in AMCA's online database
- or
- Identify AMCA-certified products in manufacturer literature and verify certification in AMCA's online database

STEP 3: VERIFY CERTIFIED-PERFORMANCE PARAMETERS

- View approved manufacturer literature found or referenced in AMCA's online database

STEP 4: WRITE A SUBSTITUTION-PROOF SPECIFICATION

- Write a performance specification; do not flat-spec a specific product
- Include the AMCA publication referenced in the "CRP Publications" column in Table 1
- Include the appropriate standard(s) from the "Test/Rating Standards" column in Table 1
- Do not include "tested in accordance with ..." without referencing compliance with an AMCA 11-series publication
- Do not include "tested in an AMCA or AMCA-accredited laboratory"

STEP 5: VERIFY THE AUTHENTICITY OF CERTIFICATION

- Compare the actual product to the product in the specification
- Verify the product is in AMCA's online certified-products database
- Verify the product/manufacturer is not in AMCA's online CRP-violations database
- Verify the AMCA seal is correct
- Verify the AMCA seal is authentic
- Verify the product and company names match those on the AMCA certification

AMCA ONLINE RESOURCES

AMCA International
www.amca.org

Searchable database of AMCA-certified products
http://bit.ly/CRP_database

Violations of the AMCA CRP
http://bit.ly/CRP_Violations

AMCA publications and standards
www.amca.org/store

AMCA Laboratory Accreditation Program
www.amca.org/testing/becomeaccreditedlab.php

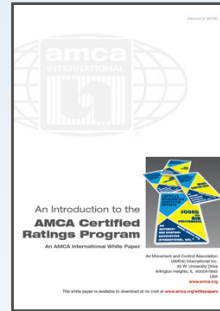
AMCA listing and labeling programs
www.amca.org/testing/aboutlistingandlabeling.php

AMCA white papers
www.amca.org/whitepapers

Asia AMCA
www.asiaamca.org

OTHER CRP WHITE PAPERS

Available at www.amca.org/whitepapers:



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 covered by the CRP.



GUIDELINE SPECIFICATIONS FOR SELECTED AMCA-CERTIFIED PRODUCTS—Provides example specifications for AMCA-certified products of primary interest to the engineering community. Also provides a list of referenced AMCA standards and publications and a list of online resources from AMCA.



AMCA INTERNATIONAL
30 W. UNIVERSITY DRIVE
ARLINGTON HEIGHTS, IL 60004-1893
USA
+1 847-394-0150
publications@amca.org

PHOTOGRAPHS ARE NOT AN IMPLICATION OF AMCA'S
ENDORSEMENT OF A PRODUCT OR COMPANY.