CRP FAQs

GENERAL CERTIFIED RATINGS PROGRAM QUESTIONS

Q: Is there a way to easily certify a product that we purchase from another company and sell it under our name?

A: Yes, AMCA 11 calls it "nameplating." Section 8.2 of AMCA 11 describes the process:

> "A company that buys a licensed product from another company and sells the product under its own name and product designation may apply for the AMCA International Certified Ratings Seal by completing and submitting form CRP B. The applicant shall follow the procedures of Section 7.11 through 7.14 to obtain a license for the "nameplated" line. The original Licensee shall be responsible for supplying performance rating information to the nameplating company."

The Original Equipment Manufacturer must have the product already licensed by AMCA. The procedures of Section 7.11 through 7.14 are simply the requirements to submit a proof catalog, having it checked by AMCA then AMCA issuing the License Appendix. There are no testing requirements at all placed on the nameplating company. In fact, the nameplating company does not even have to be a manufacturer (if not a member or manufacturer, they would need to be recognized as a CRP affiliate or perspective CRP affiliate).

Anyone can obtain the form from our website. Completed forms and proof catalogs should be submitted to Lisa Ullrich at certification@amca.org.

Q. What company name is required to be listed as certifying a product?

A. The company name listed in a catalog of a licensed product must exactly match the company name listed on the CRP form, License Agreement, and AMCA's Member Database. This is why it is very important to keep AMCA International updated on company name changes. If you have a company name change to report, please contact Lisa Ullrich (lullrich@amca.org) or Cathy Nestor (cnestor@amca.org).

FAN CERTIFIED RATINGS PROGRAM QUESTIONS

Q: What is the minimum number of tests that I would have to complete to get my housed centrifugal fan product line certified?

A: The minimum number of fans required to be tested in the AMCA Certified Ratings Program depends on the design of the product line. For a housed centrifugal fan, if the entire fan product line is geometrically proportional to the smallest size, then the entire product line could be certified based on the test of the smallest size by use of the fan laws. In general the manufacturer may not want to base the performance of all sizes in a product line on the smallest fan. The down side of doing this is that the fan laws will provide a conservative

estimate of the performance of the larger fans. If the fan is very much larger, the ratings may be too conservative to compete effectively in the market. Of course, decisions like this must be made by the manufacturer. Annex A of AMCA 211 describes the program requirements for proportionality.

AIR CONTROL DEVICES CERTIFED RATINGS PROGRAM QUESTIONS

Q: Can I get my Sand Louver certified?

A: Yes. Sand louvers have been certified for air and water performance for some time. Now, louvers can be certified for rejection of sand. Wind driven sand is the newest AMCA certification program. It was added to the AMCA portfolio in January 2016. The performance of sand louvers is based on tests performed in accordance with AMCA 500-L-12 (Rev. 2015). The testing for this program can be accomplished at Thomas Bell-Wright International Consultants testing lab in Dubai, U.A.E. Please contact the certification department (certification@amca.org) at AMCA Headquarters for further information.

Q: How do I calculate the Free Area of Sand Louver?

A: AMCA 500-L does not currently address how to calculate the free area of a sand louver. The AMCA International Headquarters Lab measures and adds together the gaps between the front blades (and between the blades and jambs) and again measures and adds together the gaps between the rear blades (and between the blades and jambs). They use the smaller of these two sets of measurements and multiplies it by the exposed blade length. The exposed blade length is the shorter of the head to sill blade length (either front or rear) or the inside dimension of the height of the sleeve that is often found on the rear of the sand louver, whichever is shorter. Please see the drawing below.

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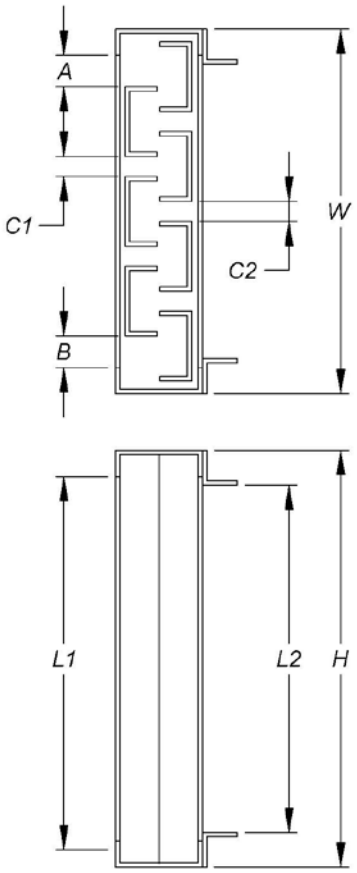

$$C = \min\begin{cases}(N_1 \times C_1) + A_1 + B_1 \\ (N_2 \times C_2) + A_2 + B_2\end{cases}$$

$$L = \min\begin{cases}L_1 \\ L_2\end{cases}$$

$$FA = C \times L$$

Where:

C is the smaller of the overall gap between the jambs on the inlet vs those on the outlet,

L is the smaller of the overall exposed blade length of the inlet blades vs the outlet blades

C_x is the gap between the vertical blades,

A_x is the gap between the end blade on one side and the jamb,

B_x is the gap between the end blade on the other side and the jamb,

L_x is the exposed vertical blade length, and

The subscript x indicates either the inlet side (indicated by a '1') or the outlet side (indicated by a'2').

Note: In this drawing/example A_2 and B_2 are 0 (and not shown).

Q: I want to certify the performance of my sand louver, does it have to be certified for air performance?

A2: Yes. Louver air performance certification is required if sand rejection performance is certified. To certify for air performance the louver must be tested per the requirements of AMCA 500-L using either a Figure 5.4 or Figure 5.5 setup on a 1220 mm X 1220 mm louver. The tested and rated air performance can either be intake, exhaust, or both.

Q: I would like my rectangular volume control damper's pressure drop and leakage class certified. What testing is required for AMCA International Certification?

A: To obtain air leakage certification for a Volume Control Damper, air performance certification must also be obtained. The following sizes are required to be tested for air performance in accordance with AMCA 500-D in both directions of airflow (i.e., two tests each minimum) in at least one configuration (ducted or plenum):

305 mm X 305 mm (12 in. X 12 in.)
610 mm X 610 mm (24 in. X 24 in.)
914 mm X 914 mm (36 in. X 36 in.)
305 mm X 1220 mm (12 in. X 48 in.)
1220 mm X 305 mm (48 in. X 12 in.)

For leakage, tests are conducted in accordance with AMCA 500-D. Two tests are required to be performed in each direction (for a total of four tests for each size tested):

305 mm X 1220 mm (12 in. X 48 in.)
Max width X 914 mm (Max. width X 36 in.)
Up to two additional sizes can be tested: Any width between 305 mm and max width X 914 mm (any width between 12 in. and max. width X 36 in.).

Q. My company does not manufacture all the volume control dampers sizes needed to certify the product line for leakage and air. Is there any way to get the product line certified?

A. The leakage certification program for volume control dampers requires a minimum of two sizes with an option of two more sizes of dampers to be tested for leakage and five different sizes for air performance (pressure drop) testing. If the manufacturer does not manufacture the required sizes, then they are not required to be tested. They could then test a multi-section damper to meet the size requirement. But, <u>at least one</u> of the required size for each certification (leakage and air) is required to be eligible for certification.

Q: What is the difference between Free Area, Face Area, and Core Area?

A: These three metrics describe different areas associated with damper and louver certification and performance. Definition of these terms can be found in the AMCA standards that use them.

Generally:

Face area is the total cross sectional area of a damper, duct or wall opening. It is used to normalize the airflow rate through different size dampers.

The core area of a louver is product of the minimum height and minimum width of the front opening in a louver assembly with the louver blades removed. So if the blades were removed from the louver, this is the area in the front of the louver that is open. Core area is only used to determine wind driven rain effectiveness for louvers. It is noly measured at the front of the louver.

Free area is the minimum area through which air can pass. It is commonly used to normalize the airflow rate through a louver when subjected to water or sand or representing pressure drop. Free area is also required to be shown in the catalog for most louver certification schemes.

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The measurement of free area is not always straight forward. AMCA 500-L describes how it is measured for several different types of louvers. For the newer sand louvers, measurement of free area is described in one of these FAQs and will be added to AMCA 500-L at the next opportunity.