AMCA Publication 511-10 (Rev. 8/12)

Certified Ratings Program - Product Rating Manual for Air Control Devices

AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.

The International Authority on Air System Components

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Certified Ratings Program
Product Rating Manual for Air Control Devices

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Related AMCA Documents

Related Publications	AMCA Publication 11	*Certified Ratings Program Operating Manual*
	AMCA Publication 111	*Laboratory Accreditation Program*
	ANSI/AMCA Standard 500-D	*Laboratory Methods for Testing Dampers for Rating*
	ANSI/AMCA Standard 500-L	*Laboratory Methods for Testing Louvers for Rating*
	AMCA Publication 512	*AMCA Listing Label Program*
	ANSI/AMCA Standard 540	*Test Method for Louvers Impacted by Wind Borne Debris*
	ANSI/AMCA Standard 550	*Test Method for High Velocity Wind Driven Rain Resistant Louvers*

Contents

1. Purpose

AMCA Publication 511 dictates proper presentation of data and other required technical procedures for certification of air control devices under the AMCA Certified Ratings Program. This manual shall be used in conjunction with the current edition of AMCA Publication 11.

2. Scope

The products within the scope of this program are air control devices for use in general ventilation and air conditioning systems.

This program shall apply only to complete cataloged series of sizes. It shall not apply to individual sizes in a series, or part of a series of sizes, or to special units on which catalog ratings are not published.

The AMCA Certified Ratings Seal shall be used only in connection with the specifically licensed device. The AMCA Seal shall be used only on complete units. The application of the AMCA Seal to individual component parts, such as blades, frames, etc., is not permitted.

3. Definitions and Symbols

3.1 Definitions

All definitions found in AMCA Publication 11, as well as the definitions in this section, apply to this program.

3.1.1 Appurtenance
Any item in the air stream or on the inlet or discharge of the air control device that may affect the performance of the air control device.

An appurtenance shall be considered a part of the air control device if it is in place when the device is tested for performance rating, and the effect of the appurtenance is included in the cataloged performance rating.

3.1.2 AMCA Certified Ratings Program
A program for certifying a product's performance ratings, as defined in this document.

3.1.3 Performance rating(s)
Data generated from actual tested products used to derive the certified and published information.

3.1.4 Shall and should
The word "shall" indicates a mandatory requirement; the word "should" indicates an advisory statement.

3.1.5 Aerodynamically similar
Louvers and dampers are considered to be aerodynamically similar if the profiles of the components in the air stream are geometrically similar. The blades shall be in relative position to the frame and the center-to-center dimensions shall be the same. Frame, blade stops, and blade profiles may have slight variances due to manufacturing methods. Blades must have the same streamline shape in that their leading and trailing edges shall be dimensionally equal. The overall angle or curvature of the blade must be the same. Slight deviations in material thickness shall not reduce the overall free area by more than 5% for dampers and 2.5% for louvers. Blade seals shall have the same profile, be of the same durometer, and be secured to the blade in the same manner.

3.1.6 Volume control damper
A volume control damper is a device which, when mounted to a duct or opening, is used to vary the volume of air through the duct or opening. It can be operated manually or mechanically and may have one or more blades.

For the purposes of this document, dampers meeting the definition of a backdraft damper or a UL classified damper shall not be considered a volume control damper. Ultra-low leakage dampers and zero leakage (bubble-tight) dampers may be tested as a volume control damper.

3.1.7 Backdraft damper
A damper which, when mounted in a duct or opening, permits airflow in one direction and prevents airflow in the opposite direction.

3.1.8 UL Classified damper
For the purpose of this document, a device which is classified to Underwriters Laboratories category code EMME (Dampers for Fire Barriers and Smoke Applications) as a smoke damper, combination fire and smoke damper, or corridor damper.

3.1.9 Ultra-low leakage damper
A device that leaks 35.2 L/s/m^2 (6.93 cfm/ft^2) or less at a static pressure differential of 3.0 kPa (12 in. wg). Leakage performance of ultra-low leakage dampers may be certified at any static pressure differential 3.0 kPa (12 in. wg.) or greater as long as the leakage doesn't exceed 2 × $(\Delta P_s)^{0.5}$.