AMCA Publication 211-13 (Rev. 2015)

Certified Ratings Program - Product Rating Manual for Fan Air Performance

AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL INC.

The International Authority on Air System Components

AMCA Publication 211-13 (Rev. 2015)

Certified Ratings Program
Product Rating Manual for Fan Air Performance

Air Movement and Control Association International
30 W. University Drive
Arlington Heights, Illinois
60004

Authority

AMCA Publication 211-13 (Rev. 2015) was adopted by the membership of the Air Movement and Control Association International Inc. on April 21, 2015.

The 2015 revision removes the exclusion for induced flow fans.

Copyright

Objections

Air Movement and Control Association International Inc. will consider and take action upon all written complaints regarding its standards, certification programs or interpretations thereof. For information on procedures for submitting and handling complaints, write to

Air Movement and Control Association International

30 West University Drive
Arlington Heights, IL 60004-1893 U.S.A.
AMCA International Incorporated

European AMCA
Avenue des Arts, numéro 46
à Bruxelles (1000 Bruxelles)

Asia AMCA Sdn Bhd
No. 7, Jalan SiLC 1/6,
Kawasan Perindustrian SiLC Nusajaya,
Mukim Jelutong, 79200 Nusajaya, Johor
Malaysia

Disclaimer

AMCA uses its best efforts to produce publications for the benefit of the industry and the public in light of available information and accepted industry practices. However, AMCA does not guarantee, certify or assure the safety or performance of any products, components or systems tested, designed, installed or operated in accordance with AMCA publications or that any tests conducted under its publications will be non-hazardous or free from risk.

Related AMCA Documents

Publications	AMCA Publication 11	*Certified Ratings Program Operating Manual*
	AMCA Publication 111	*Laboratory Accreditation Program*
	AMCA Publication 311	*Certified Ratings Program - Product Rating Manual for Fan Sound Performance*
Standards	ANSI/AMCA Standard 99	*Standards Handbook*
	ANSI/AMCA Standard 205	*Energy Efficiency Classification for Fans*
	ANSI/AMCA Standard 210	*Laboratory Methods of Testing Fans for Certified Aerodynamic Performance*
	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*
	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*

Review Committee

Thomas Gustafson Committee Chair	Hartzell Air Movement
John Cermak	Acme Engineering and Manufacturing Corporation
Abishek Jain	Air Flow PVT. LTD.
Tim Sutton	Carnam Ltd.
Franco Cincotti	Comefri USA Inc.
Armin Hauer	ebm-papst Inc.
Fernando Ruiz Contreras	Equipos Electromecanicos, S.A. de C.V.
Scott Kurszewski	Greenheck Fan Corporation
Kim Osborn	Governair LLC
Michael Brendel	Lau Industries Inc.
Keith Lins	M. K. Plastics Corporation
Hesham Morten Gabr	Multi-Wing
Andy Timm	New York Blower
Rad Ganesh	Twin City Fan
Yong Ning Chen	Zhejiang Yilida Ventilator Co. Ltd.
Florian Braun	Ziehl-Abegg Inc.
Joe Brooks	AMCA International
Tim Orris	AMCA International

Contents

1. Purpose and Scope

The purpose of this manual is to prescribe technical procedures to be used in connection with the AMCA Certified Ratings Program for Fans - Air Performance.

Products that can be licensed by AMCA to bear the AMCA Certified Ratings Seal are those defined in AMCA Standard 99, Section 0068, ISO 13349 and IEC 60335-2-80, and are within the product scope of AMCA International.

The program applies only to fans, and is not applicable to their component parts such as fan impellers and housings.

2. Normative References

AMCA Publication 11, *Certified Ratings Program - Operating Manual*
ANSI/AMCA Standard 99, *Standards Handbook*
AMCA Publication 111, *Laboratory Accreditation Program*
AMCA Publication 200, *Air Systems*
ANSI/AMCA Standard 205, *Energy Efficiency Classification for Fans*
ANSI/AMCA Standard 210, *Laboratory Methods of Testing Fans for Certified Aerodynamic Performance*
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*
ANSI/AMCA Standard 240, *Laboratory Methods of Testing Positive Pressure Ventilators for Aerodynamic Performance Rating*
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*
AMCA Publication 311, *Certified Ratings Program - Product Rating Manual for Fan Sound Performance*
ISO 5801, *Industrial Fans -- Performance Testing Using Standardized Airways*
ISO 13350, *Industrial Fans -- Performance Testing of Jet Fans*

3. Definitions

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

3.1 Appurtenance (accessory)
Any item in or on the inlet or discharge air stream that affects the performance of the fan.

3.2 AMCA Certified Ratings Program - Air Performance
A program for certifying a product's aerodynamic performance ratings, as defined in this document.

3.3 Performance rating(s)
A statement of the pressure performance and power versus airflow at a given speed at standard inlet air density or other specified density. Efficiency may also be included in the performance ratings at the option of the licensee. Power shall be specified as impeller, shaft, or motor power, as appropriate. The rating may be published in tabular and/or graphical format. Specific performance rating requirements are given in the Product Rating Requirement Sections of this document.

3.4 Shall and should
The word "shall" is understood to be a mandatory requirement and the word "should" is understood to be advisory.

3.5 Constant speed
Test data are converted to a single speed before catalog data are generated.

3.6 As-run speed
Test data are not converted to a single speed before catalog data are generated.

3.7 Fan Efficiency Grade (FEG)
A metric defined by ANSI/AMCA Standard 205 that represents an efficiency grade for fans without consideration of the drives.

4. Data Submittal Requirements

The following data shall be submitted with the CRP-8 application form:

Test data for each test conducted (observations of all variables measured for each test point), which must conform to the test standard used.

Results of the test(s) corrected to standard air density, and constant speed, where applicable.

Drawings of each size of the product line, showing the dimensions specified in Annex A for the type of product being submitted.

Photograph of each test setup.