



## *Associated Air Balance Council*

# Membership & Certification Package

### **AABC NATIONAL HEADQUARTERS**

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*Dear Prospective Member Agency:*

***Thank you for your interest in the Associated Air Balance Council, the world's leading association of professional, independent test and balance agencies!***

*If your company wishes to apply for membership and certification in AABC, please review the requirements and complete the application for membership. In order to assist you in compiling your application, we have included several helpful items in this informational package:*

- Membership Qualifications ----- page 3
- Certification Qualifications ----- page 4
- Membership Dues & Fees Schedule----- page 4
- Application Process ----- page 5
- Application Checklist ----- page 6
- Sample Test and Balance Report Format ----- pages 7-8
- AABC Application for Membership & Certification ----- pages 9-10

*Once your application is complete, please submit ten (10) neatly bound copies of the application package, including all required documentation, to the AABC National Headquarters. An application fee of \$500.00 is also required.*

*Your application is subject to review, investigation, and approval by the AABC Board of Directors. Pending approval, the Certified Test & Balance Engineer's Examination will be administered to you in Washington, D.C.*

*If I can be of any further assistance, please let me know.*

*Sincerely,*

*Kenneth M. Sufka  
Executive Director*

## MEMBERSHIP QUALIFICATIONS

### A. Independence –

The applying agency must qualify as an independent testing and balancing firm that has no affiliation with manufacturers of equipment or system components, installing contractors, engineering firms, architects, or any other person or company that could affect the ability of the member to render an independent test and balance report.

- i) The following are considered acceptable activities in the test and balance discipline: Commissioning, IAQ Testing, Expert Testimony, Troubleshooting, Verification of Controls, Cleanroom Certification.
- ii) The following are not considered acceptable activities in the test and balance discipline: General Contractor, Electrical Contractor, Service Contractor, Mechanical Contractor, Selling HVAC products, Controls, Design Engineer, HVAC work, subcontracting balancing work to other non-AABC balancing firms or individuals, and (duct cleaning\*). (*\*A separate company would be required, controlling interest would be acceptable, prior disclosure to owner required.*)

### B. Years in Business –

The applying agency must have been in business as an independent testing and balancing agency (not as an individual) for a period of not less than three (3) years. If it has not been in business for three years, the applicant must demonstrate to the AABC Board of Directors that it has sufficient expertise and experience to adequately and properly perform test and balance work as an AABC agency to be considered for membership. The need for this time period is to provide the Council with evidence of the ability, business ethics, and experience of the applicant agency.

### C. Established Place of Business –

The applying agency must have an established place of business and must maintain properly equipped and staffed office facilities capable of compiling and distributing appropriate reports and data established from field measurements, and of furnishing the consulting engineer with completely reliable documentation of system information that can be verified by the engineering firm or its clients.

### D. Financial Responsibility –

The applying agency must furnish the Council with satisfactory proof of financial responsibility for the payment of wages, benefits, and contributions to all funds involving both labor and the Council. The satisfactory proof shall be in the form of an adequate bank account and financial statement, as well as copies of tax returns for the previous three (3) years.

### E. New Member Probation –

All new members of AABC are subject to a two-year probationary period, during which time the agency's performance is closely monitored to ensure compliance with AABC standards and guidelines. AABC and/or its investigator will have the right to perform quality checks on any and all jobs or require additional paperwork necessary for a full investigation. After two (2) years, the agency's status will be reviewed for full membership.

## CERTIFICATION QUALIFICATIONS

### A. Test and Balance Engineer (TBE) Certification –

If the applicant is approved, at least one individual from the applying agency must meet the requirements and pass the Test and Balance Engineers (TBE) examination.

In order to be eligible for certification, the applicant must have at least eight (8) years of experience, consisting of at least five (5) years of field experience in system testing and balancing.

- i) Graduation from an engineering school or college counts as four (4) years of experience. Each year of training after graduation, as a prospective TBE, counts as one (1) year of experience. Mechanical Engineering graduates must have completed four (4) years of engineering school, plus at least four (4) years of field experience working for a TAB firm, to be eligible for certification.
- ii) Applicants without engineering degrees receive credit as follows: each year of engineering school completed will count as one (1) year of experience credit; for each year of practice in the field of air conditioning, the person shall be given one (1) year's credit.

### B. Field Personnel (Test and Balance Technicians) –

The applying agency must also agree that upon approval of membership, all technicians who meet AABC's eligibility requirements (listed below) will become certified through the AABC Technician Certification program.

- i) The applicant must have a minimum of three (3) years test and balance experience, unless the applicant can show adequate qualifications as may be determined by the Board of Directors. The applicant must have been employed by a certified AABC member agency for the last 12 months.
- ii) The applicant shall be competent in the areas of air, water, sound and vibration, and shall be able to perform all work in accordance with the AABC National Standards and AABC Test & Balance Procedures.

## MEMBERSHIP DUES AND FEES SCHEDULE

<b>Membership Application Fee:</b>	<b>\$ 500.00</b> <i>(to be included with Application submittal)</i>
<b>Monthly Membership Dues:</b>	<b>\$ 550.00</b> <i>(includes registration fee for AABC Annual Meeting.) Billed monthly and due by the 20<sup>th</sup> of each month.</i>
<b>Branch Office Dues:</b>	<b>\$ 235.00</b> <i>(per month for each additional office location)</i>
<b>TBE Application Fee:</b>	<b>\$ 150.00</b>
<b>Technician Application Fee:</b>	<b>\$ 100.00</b>

## APPLICATION PROCESS

- **Submit (10) bound copies** of the completed Membership Application to AABC National Headquarters. *Please see page 6 for an Application Checklist.*

**AABC National Headquarters  
Attn: Mr. Kenneth Sufka, Executive Director  
1518 K Street NW  
Suite 503  
Washington, DC 20005**

- **Application Due Dates.** In order to have your application reviewed at the next AABC Board of Directors Meeting, your application must be submitted to AABC Headquarters **no later than 30 days prior** to the next quarterly board meeting. The AABC Board of Directors meets during the following months (*please contact AABC HQ for exact dates and deadlines*):
  - **JANUARY**
  - **APRIL**
  - **JULY**
  - **OCTOBER**
- **Review & Investigation Process.** Upon receipt in AABC Headquarters, a copy of your *completed* application will be provided to each member of the AABC Board of Directors for review, and notification of the application shall be sent to all members of the Zone in which the application is filed.
  - Upon approval by the Board, the assigned Zone Vice President will work with you to schedule an on-site investigation. The purpose is to visit the office of the applicant, inspect the facilities and equipment, and review the corporate records. The applying agency must disclose any information that the AABC representative requires in order to conduct a thorough membership investigation.
  - Once this investigation has been completed, the Zone Vice President will report his findings & recommendations back to the Board at their next Meeting.

***Anticipated Timeline: Please note that the Review & Investigation Process can typically take approximately 6-9 months, depending on the initial date received, completeness of the application, and the investigation results.***

- **Test and Balance Engineer (TBE) Exam.** When it is determined by the Board of Directors that the applicant meets the requirements for membership in AABC, the agency shall be notified by AABC that a representative of the company may take the TBE exam. The Test and Balance Engineer's (TBE) examination will be administered at National Headquarters and must be taken within six (6) months from the date of notification. (*Please see page 4 for a list of TBE certification requirements.*)

If the applicant receives a passing score of 70% or better on the TBE exam, he/she shall be issued a registered TBE certification number, and provided with an AABC Annual Membership Certificate, TBE Certificate, and all pertinent membership materials.

## APPLICATION CHECKLIST

Ten (10) neatly bound copies of the application submittal package are required, including as a minimum, the following items:

- 1. Application** *(see page 9 for Membership Application form)*
- 2. Personnel Data**

Attach resumes (education and experience) of employees working directly in the field performing testing and balancing services. The applying agency must also carry the required coverage for its employees under State Worker's Compensation laws.
- 3. Financial Statements** *(Audited or prepared by a CPA)*

Attach current financial statement or adequate proof of financial responsibility, including tax returns for the previous three (3) years.
- 4. Equipment and Instrumentation List**

Attach a list of all instruments (with calibration dates), currently owned by the company. The applicant must furnish AABC with satisfactory proof of sole ownership and possession of instrumentation as described in the AABC National Standards.
- 5. Letters of Recommendation**

The applicant must furnish AABC with ten (10) letters of recommendation from different companies, at least five (5) of which must be from registered professional engineers (P.E.) affiliated with either a consulting engineering firm or project owner, establishing its qualifications and capabilities as a competent independent testing and balancing agency. These letters must be current and written within one (1) year of the date of the submittal.
- 6. Projects List**

Attach a list with the name and address of ten (10) comprehensive test and balance projects performed by the present company during the last three (3) year period. These projects should be comprehensive in order to demonstrate the company's ability to follow the AABC National Standards.
- 7. Two (2) Test and Balance Reports** *(see page 7 for recommended format)*

Include two (2) preliminary and final comprehensive test and balance reports including both air and water balancing; plans and specifications for the projects; and all correspondence relation to preliminary inspections, plan review, troubleshooting, classification, etc., connected with the project. These reports should demonstrate the abilities of the applicant to analyze, balance, and report its findings concerning the project.
- 8. Notarized Written Statement of Independence**

Attach a notarized written statement certifying that the applicant is an independent agency having no affiliation with engineers, architects, general or installing contractors, or manufacturers of components of environmental systems. The term "Affiliation" includes a financial interest or exchange of personnel.

# SAMPLE TEST AND BALANCE REPORT FORMAT

AABC requires that every final test and balance report include the following items:

## 1. Preface

A general discussion of the system, any abnormalities and problems encountered.

## 2. Instrumentation List

The list of instruments including type, model, manufacturer, serial number, and calibration dates.

## 3. System Identification

In each report, the VAV boxes, zones, supply, return, and exhaust openings, and traverse points shall be numbered and/or lettered to correspond to the numbers and letters used on the report data sheets.

## 4. Air Handling Equipment

- A. Manufacturer, model number, and serial number.
- B. All design and manufacturer related data.
- C. Total actual CFM by traverse if practical, if not practical the sum of the outlets may be used, or a combination of each of these procedures. For specific systems, such as ones with diversity, see the AABC National Standards.
- D. Suction and discharge static pressure of each fan, as applicable.
- E. Outside air and return air total CFM.
- F. Actual operating current, voltage, and brake horsepower of each fan motor.
- G. Final RPM of each fan.
- H. Fan and motor sheave manufacturer, model, size, number of grooves, and center distance.
- I. Belt size and quantity.
- J. Static pressure controls' final operating set points.

## 5. Pumps

- A. Manufacturer, size, and serial number.
- B. All design and manufacturer's related data.
- C. Pump operating suction and discharge pressure and final total dynamic head.
- D. No flow (pump discharge valve closed) suction and discharge pressure and corresponding total dynamic head. This procedure is to determine actual impeller size.
- E. Rated and actual operating current, voltage, and brake horsepower of each pump motor.
- F. Submit pump curve showing design, operating, and no-flow points of operation.

## 6. Chillers

- A. Manufacturer, model number, and serial number.
- B. All design and manufacturer's rated data.
- C. Rated and actual pressure drop across evaporators and condensers and related GPM.
- D. Entering and leaving water temperatures.
- E. Rated and actual operating current and voltage.

## Sample Test and Balance Report Format (cont.)

### 7. Heat Exchangers

- A. Manufacturer and model number.
- B. All design and manufacturer's related data.
- C. Service and location.
- D. Actual pressure drop and related GPM or steam pressure, primary side.
- E. Actual pressure drop and related GPM, secondary side.
- F. Primary side entering and leaving temperatures.
- G. Secondary side entering and leaving temperatures.
- H. Temperature control setting.

### 8. Heating & Cooling Coils

- A. Manufacturer.
- B. All design and manufacturer's related data.
- C. Rated and actual water pressure drop through each coil and related GPM.
- D. Rated and actual static pressure drop across each coil.
- E. Entering and leaving water temperatures.
- F. Wet bulb and dry bulb temperatures entering and leaving each cooling coil; dry bulb temperatures entering and leaving each heating coil.

### 9. Electric Heating Coil/Duct Heater

- A. Manufacturer and model number.
- B. All design and manufacturer rated data.
- C. Actual operating current and voltage.
- D. Coil location and identification number.

### 10. Cooling Tower (if applicable)

- A. A copy of the Cooling Tower Test Data Summary Sheet.
- B. A sketch of the cooling tower installation showing tower orientation, principal dimensions, location of temperature and flow rate measurement points, and notation of any building obstructions, or other equipment in the immediate vicinity of the tower.
- C. Copies of completed test data sheets.
- D. A copy of test calculations, including performance curves and cross plots.
- E. Observations on compliance with Test Code limitations and uniformity of test conditions. Include comments on any suggested changes to the tower such as increasing fan speed or blade pitch to obtain rated brake horsepower.



ASSOCIATED AIR BALANCE COUNCIL

# Application for Membership and Certification

**Application Fee: \$500** – Please include a check for the application fee with each application filed. Incomplete applications or applications not accompanied by the requisite application processing fee will not be accepted.

## COMPANY INFORMATION

Company Name

Name(s) of Present Owner(s)

Street Address

City State Postal Code

( ) -  
Phone Number

( ) -  
Fax Number

Email Address

/ /  
Date Business was Incorporated

Name(s) of Original Corporation Members

### Educational, Business, and Work Background of Present Owner(s)

Please **attach the resume(s)** of the Present Owner(s) that demonstrates the Educational, Business, and Work Background for the past ten (10) years. *Please list any affiliation with contractors, manufacturers, or engineering firms below.*

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## COMPANY BANKING FACILITIES

Name of Bank Contact Name

Street Address

City State Postal Code

( ) -  
Phone Number

( ) -  
Fax Number

Email Address

## ATTACHMENTS:

Ten (10) neatly bound copies of the application submittal package are required, including as a minimum, the following items:

### Personnel Data

Attach resumes (education and experience) of employees working directly in the field performing testing and balancing services. The applying agency must carry the required coverage for its employees under State Worker's Compensation laws.

### Financial Statements *(Audited or prepared by a CPA)*

Attach current financial statement or adequate proof of financial responsibility, including tax returns for the previous three (3) years.

### Equipment and Instrumentation List

Attach a list of all instruments (with calibration dates), currently owned by the company. The applicant must furnish AABC with satisfactory proof of sole ownership and possession of instrumentation as described in the AABC National Standards.

### Letters of Recommendation

The applicant must furnish AABC with ten (10) letters of recommendation from different companies, at least five (5) of which must be from registered professional engineers (P.E.) affiliated with either a consulting engineering firm or project owner, establishing its qualifications and capabilities as a competent independent testing and balancing agency. These letters must be current and written within one (1) year of the date of the submittal.

### Projects List

Attach a list with the name and address of ten (10) comprehensive test and balance projects performed by the present company during the last three (3) year period.

### Two (2) Test and Balance Reports

Include two (2) preliminary and final comprehensive test and balance reports including both air and water balancing; plans and specifications for the projects; and all correspondence relation to preliminary inspections, plan review, troubleshooting, classification, etc., connected with the project. These reports should demonstrate the abilities of the applicant to analyze, balance, and report its findings concerning the project.

### Notarized Written Statement of Independence

Attach a notarized written statement certifying that the applicant is an independent agency having no affiliation with engineers, architects, installing contractors, or manufacturers of components of environmental systems. The term "Affiliation" includes a financial interest or exchange of personnel.

## PLEASE ANSWER THE FOLLOWING:

**A.** If I am accepted and certified by AABC, I agree to perform all work in accordance with the AABC National Standards.

Yes       No

**B.** If accepted and certified, I agree to uphold all professional and ethical standards of AABC.

Yes       No

**C.** If certified, I agree to abide by all decisions and bylaws established by the over membership and Board of Directors of AABC.

Yes       No

**D.** Have you applied for AABC membership before? *If you have, you must reimburse AABC for the cost of the investigation.*

Yes       No

Upon receipt of a completed application (10 bound copies of all required information), the application will be reviewed by an appointed official of AABC. If the application is approved, an investigation will be made. The results of the investigation, which will include an on-site inspection of the applicant's methods and procedures in the field, will be submitted to the AABC Board of Directors for review. The results of the investigation along with the details as set forth in this application will determine the acceptance or rejection of the applicant.

If the applying company is accepted for membership and certification, an eligible employee must successfully complete the AABC Test and Balance Engineer's (TBE) examination. If this is accomplished AABC will issue a certification number, and the work performed by the agency will then come under the "National Performance Guaranty" as issued by the Associated Air Balance Council.

Incomplete applications or applications not accompanied by the requisite \$500.00 application processing fee will not be accepted.

Application Submitted By: *(Print Name)* \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



### FOR AABC USE ONLY

Date Received: \_\_\_\_\_ Investigating Officer: \_\_\_\_\_

Submitted to Board: \_\_\_\_\_ - \_\_\_\_\_ Date: \_\_\_\_\_

Application Fee: