



Associated Air Balance Council

Membership & Certification Package

AABC NATIONAL HEADQUARTERS

1015 18th St NW, Ste 603

Washington, DC 20036

Phone: (202) 737-0202

Web: www.aabc.com

Email: info@aabc.com



Dear Prospective Certified 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 Steps & Timeline----- 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 electronically submit your application package, including all required documentation, to AABC National Headquarters at info@aabc.com. An application fee of \$500.00 is also required, which you may send by check or pay securely online.

Your application is subject to review, investigation, and approval by the AABC Board of Directors. After preliminary approval, a designated company representative meeting the stated requirements must pass the Certified Test & Balance Engineer's Examination.

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

Raymond R. Bert
Executive Director

MEMBERSHIP QUALIFICATIONS

A. Independence –

To qualify as independent and therefore eligible for AABC membership and certification, a test and balance company must have no business 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. An AABC member or its owners may not exercise control over operations of another company which could affect TAB work.

- i) The following are considered acceptable activities in the test and balance discipline: Commissioning, IAQ Testing, Expert Testimony, Troubleshooting, Verification of Controls, and 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.

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. Regardless of the time in business, the applying agency must demonstrate that it is an established business entity with the experience, and demonstrated ability to do business as an AABC TAB agency in accordance with the AABC National Standards.

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 Oversight Period:

All new members of AABC are subject to a two-year "oversight" period, during which time the agency's performance is closely monitored to ensure compliance with AABC Standards and policies. 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 Engineer (TBE) examination (two attempts maximum per individual) within 6 months.

In order to be eligible for certification, the applicant must have at least eight (8) total years of experience, including at least four (4) years of field experience in system testing and balancing, meeting one of the following tracks:

- i) **Engineering school graduates:** 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:** each year of engineering school completed will count as one (1) year of experience credit; for each year of practice in the field of system testing and balancing, 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

Membership Application Fee:	\$ 500.00 <i>(to be included with Application submittal)</i>
Monthly Membership Dues:	\$ 600.00 <i>(includes registration fee for AABC Annual Meeting) Billed monthly and due by the last day of each month.</i>
Branch Office Dues:	\$ 235.00 <i>(per month for each additional office location)</i>
TBE Application Fee:	\$ 250.00
Technician Application Fee:	\$ 200.00

APPLICATION PROCESS

- **Submit an electronic copy** of the completed Membership Application to AABC National Headquarters. *Please see page 6 for an Application Checklist.*
- Files should be sent to info@aabc.com, and sent to the attention of Ray Bert, AABC Executive Director.

**AABC National Headquarters
Attn: Ray Bert, Executive Director
1015 18th St NW, Suite 603
Washington, DC 20036**

- **Approximate 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 typically 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 Board member(s) assigned as the investigator 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 investigating Board member 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 is offered through a network of local testing centers 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 representative receives a passing score on the TBE exam, the company must then 1) Execute the AABC Membership Agreement, Ownership Certification & Quality Certification document, and 2) Pay the first month's membership dues. After completion of these final steps, the company will be issued an AABC Annual Membership Certificate, TBE Certificate(s), and all pertinent membership information.

APPLICATION CHECKLIST

An electronic copy of the application submittal package is 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 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) 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. (*Letters confirming that work was acceptable must be included from the general contractor and the engineer of record on the submitted projects.*) These reports, which must represent work done by the agency applying for membership, should demonstrate the abilities of the applying firm 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.
- ☐ **9. Company Ownership and Structure**
Documentation of the agency's complete ownership structure, identifying all individuals or entities with any ownership interest in the agency. This must include an internal organizational chart showing management and lines of reporting. This should include the primary technical contact responsible for ensuring that work will be performed in accordance with the AABC National Standards.
If the applying agency is owned by another entity, then the complete organizational structure of that entity (including all other entities that it owns), including an organizational chart for the parent company with points of contact for each entity, must also be provided.

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 click [here](#) to securely pay the application fee. Incomplete applications or applications not accompanied by the requisite application processing fee will not be accepted. (You may mail a check to AABC Headquarters if you prefer but the application will not be processed until payment is received.)

COMPANY INFORMATION

Company Name

Name(s) of Present Owner(s)

Street Address

City

State

Postal Code

() -
Phone Number

() -
Fax Number

Email Address

Website 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:

☐ 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 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 submittal.

☐ Projects List

Attach a list with the name and address of ten (10) sizeable 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) 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. (Letters from the general contractor and the engineer of record confirming that work was acceptable must be included.) Note: the reports must represent work done by the agency applying for membership.

☐ Notorized 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.

☐ Company Ownership and Structure

Documentation of the agency's complete ownership structure, identifying all individuals or entities with any ownership interest in the agency, and including an internal organizational chart showing management and lines of reporting. This should include the primary technical contact responsible for ensuring that work will be performed in accordance with the AABC National Standards. ***If the applying agency is owned by another entity***, the complete organizational structure of that entity (including all other entities that it owns), and an organizational chart for the parent company with points of contact for each entity, must also be provided.

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 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 (an electronic copy 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.

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:

Email application materials to: info@aabc.com, Attention Ray Bert.