



**AIR-CONDITIONING, HEATING,
& REFRIGERATION INSTITUTE**

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AIR-CONDITIONING, HEATING, AND REFRIGERATION INSTITUTE

STANDARDS POLICY COMMITTEE

POLICY AND PROCEDURE

DECEMBER 2013

**Air-Conditioning, Heating, and Refrigeration Institute
2111 Wilson Blvd., Suite 500, Arlington, Virginia 22201**

FOREWORD

The Standards Policy Committee (SPC) is a standing committee of the AHRI Board of Directors, and advises the Board on all matters pertaining to domestic and international standards and technical activities as developed by product sections or other sources requiring board approval. The Committee may initiate the formulation of standards when directed by the Board, and shall act for the Board in granting final approval of standards. It has the authority to appoint individuals to represent the Committee on groups outside of AHRI engaged in standards activities of mutual interest.

This document states the policies related to standards activities under which the Standards Policy Committee (SPC), product sections and their committees shall function.

Copies of this AHRI Standards Policy Committee, *Policy and Procedure* document are available to interested parties in a reasonable and timely manner. AHRI shall keep the Standards Council of Canada (SCC), the American National Standards Institute (ANSI), and others updated on its procedures.

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POLICY AND PROCEDURE

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Article 1. AHRI's Articles of Incorporation and Bylaws

1.1 Governance.

All activities of the Standards Policy Committee (SPC), its subcommittees, product sections, and the engineering committees of each product section or subsection are subject to the current provisions of AHRI's Articles of Incorporation, Bylaws, and actions of AHRI's Board of Directors (AHRI's Governance Documents). The procedures outlined in this procedure manual are subject to authority and restrictions outlined in AHRI's Governance Documents. Any conflict between the procedures stated in this manual and AHRI's Governance Documents shall be resolved in favor of AHRI's Governance Documents.

1.1.1 Legal responsibility. AHRI is a legal entity, such that it can be held legally responsible for its standards development activities. AHRI's bylaws articulate its standards development functions. AHRI is duly incorporated under the law of the Commonwealth of Virginia.

1.1.2 Canadian Facilities. AHRI has an appropriate facility in Canada with sufficient resources to meet the requirements relevant to its standards development activities in Canada. The facility is located in the offices of the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI) at 2800 Skymark Avenue, Building 1, Suite 201, Mississauga, Ontario LRW 5A6.

1.2 Committee Membership.

1.2.1 Membership. The SPC shall consist of members, appointed by AHRI's Chairman of the Board with the advice and consent of the Board. The membership should be representative of the product interests of the Institute.

1.2.2 Vacancies. In the event of a vacancy, the Chairman of the Board with advice and consent of the Board of Directors, shall appoint a new member to complete the term of the vacancy.

1.2.3 Term. Appointment to the Committee shall be for a term of four years, with one-fourth of the members appointed each year.

1.3 Scope of Powers.

The scope and powers of the SPC are stated in the Bylaws of AHRI. A more detailed statement

of its scope and powers follows:

1.3.1 Committee Scope. To provide organization, procedure, supervision and correlation necessary for the initiation, preparation, promulgation, review and revision of standards, guidelines and technical documents by AHRI product sections or other authorized groups in the fields, among others, of equipment specification, testing, rating performance, application, materials, processes and procedure. The authority to deal with these matters shall extend to standards, guidelines, or other technical documents published by AHRI, or published jointly with other organizations, or published by others with joint participation by AHRI.

1.3.1.1 To assist and coordinate the standards activities of AHRI product sections, sub-sections and other groups, and to implement the formulation, adoption and publication of new standards and guidelines or revisions to existing standards and guidelines.

1.3.1.2 To organize and assist joint engineering committees representing two or more product sections in discussion, preparation and publication of joint product section standards and guidelines.

1.3.1.3 To organize and assist engineering committees, to prepare standards and guidelines or perform other technical functions in fields not specifically included in a product section.

1.3.1.4 To compare proposed AHRI standards and guidelines with existing standards and guidelines or codes published by others and resolve differences directly or by organization of joint committees.

1.3.1.5 To perform the necessary functions, to obtain adoption of all AHRI standards, but not guidelines, as American National Standards.

1.3.1.6 To facilitate the general acceptance and use of AHRI standards and guidelines globally through the publication of notices of availability and provision of copies to interested member-companies, governmental agencies, consulting engineers, contractors, technical libraries and others.

1.3.1.7 To review existing and proposed AHRI standards, guidelines and technical publications to ensure consistent procedure and other details involved in their production.

1.3.1.8 To review existing standards and guidelines and recommend revision, reaffirmation, or withdrawal to be completed within five years.

1.3.1.9 To assist, supervise and coordinate sections or committees in their technical or engineering activities not specifically provided for otherwise.

1.3.2 ANSI Standards Activities. To cooperate with American National Standards

Institute (ANSI) in the development, approval and promotion of the use of American National Standards of interest to the manufacturers of air-conditioning, heating and refrigeration systems, equipment and apparatus, components and accessories:

1.3.2.1 By appointing representatives to review proposals of, and instructing AHRI representatives on voting relative to, standards and committees developing American National Standards.

1.3.2.2 By publishing American National Standards for which AHRI is sponsor or co-sponsor.

1.3.2.3 By recommending to the Board appropriate financial support for the maintenance of the American National Standards Institute.

1.3.3 International Standards. To participate in the development of international standards in other organizations through representation on the technical advisory groups for various International Organization for Standardization (ISO) or International Electrotechnical Commission (IEC) Technical Committees, or other appropriate international standards organizations involved in the development of standards for products within the scope of AHRI. These may be participated in by AHRI through its representatives on the U.S. Technical Advisory Group for each ISO project of interest to AHRI, which advises ANSI (the U.S.A. Member Body of ISO) and the U.S. National Committee of the IEC (the U.S.A. Member Body of IEC through ANSI) on policy and procedure.

1.3.3.1 AHRI shall proceed to develop existing AHRI and Canadian Standards Association (CSA) standards and future standards as single AHRI/CSA standards.

1.3.3.2 AHRI's policy on international standards is as follows. AHRI is committed to securing the economic and environmental benefits of globally harmonized standards for its members, the HVACR industry and consumers around the world. AHRI is committed to the continued global acceptance of AHRI standards which may be, in some circumstances, the industry's global standards of first choice. AHRI is also committed to influence the development of international standards and, if appropriate, to adopt standards produced by international standards bodies, including ISO and the IEC. AHRI product sections shall continuously review international standards, including those of ISO and the IEC, and annually report on those adopted or rejected, with the reason for either action.

1.3.3.3 Both the appropriate AHRI product section(s) and the Standards Policy Committee (SPC) shall review all Final Draft International Standards (FDIS) or published ISO Standards for approval and adoption as AHRI/ISO Standards.

1.3.3.4 AHRI's efforts to adopt ISO or IEC standards as American National Standards comply with the requirements set forth in the *ANSI Procedures for the National Adoption of ISO or IEC Standards as American National Standards*.

1.3.3.5 International Harmonization. When international standards exist or their completion is imminent, they, or their relevant parts, shall be considered as the basis for development of corresponding Canadian standards. Exceptions are where such international standards or relevant parts would be ineffective or inappropriate because of insufficient levels of protection, or fundamental climatic or geographical factors, or fundamental technological problems.

1.3.3.6 Standards Harmonization with International Community Participation. AHRI shall give priority to participating within the limits of its resources, in the preparation of international standards regarding subject matter for which it has, or expects to, develop or adopt.

1.3.4 Standards Activities of Others. To facilitate participation in standards activities of other groups, including but not restricted to, applicable ASHRAE Project Committees and various committees of the National Fire Protection Association. To keep interested groups informed, and to make provisions for their participation in such joint activities, in accordance with their interests.

1.3.5 Technical Activities of Others. Recommend representatives to serve on committees and task groups dealing with technical matters under the auspices of other trade associations, technical societies or technical groups, by:

1.3.5.1 Assisting such organizations through conferences by providing lists of member representatives to advise them.

1.3.5.2 Insuring adequate attention, by the product sections and groups concerned, to proposed technical activities of outside groups.

1.3.5.3 Coordinating and presenting a section's views to sponsoring organization.

1.3.6 Government Technical Documents. To provide through AHRI's Government Affairs Committee and/or International Committee approved technical information as regards AHRI standards, guidelines and other technical publications and activities, as requested by Departments and Agencies of the Government.

1.3.7 Powers. The Standards Policy Committee (SPC) and its two subcommittees, the Cooling Standards Subcommittee (CSS) and the Heating Standards Subcommittee (HSS), are empowered to perform the following functions:

- a. To formulate AHRI standards policy, procedure and format, subject to approval by the Board of Directors.
- b. To formulate AHRI policy and procedure for technical activities not assigned by the Board to other committees, subject to approval by the Board of Directors.

- c. To initiate, or approve the initiation of, technical activities which may result in the publication of technical documents, or which may establish a public policy of AHRI in technical documents, or which may provide interpretation of AHRI standards, guidelines, or other documents, or which by their nature cannot be initiated under the scope of a single product section of AHRI.
- d. To review, upon request of the sponsoring group drafts of standards, guidelines and technical documents in the process of development.
- e. To develop or approve an interpretation of a standard or guideline upon request for such an interpretation.
- f. Through the AHRI Staff, to invite individuals or groups at interest to participate in the development of standards, guidelines and technical documents. (See 5.2)
- g. To approve standards, guidelines and technical documents for publication (final approval).

1.4 Organization and Operation.

1.4.1 Meetings. The Standards Policy Committee (SPC) and its two subcommittees, the Cooling Standards Subcommittee (CSS) and the Heating Standards Subcommittee (HSS), shall meet at least one time each quarter and additionally as necessary.

1.4.1.1 Exceptions. When in the judgment of the Chairman there is an insufficient agenda to justify a meeting at the regularly scheduled time or for other reasons, the Chairman may postpone or cancel the meeting.

1.4.1.2 Place of Meeting. The Committee and the Subcommittees shall meet regularly at AHRI Headquarters or by teleconference (web conference), but on recommendation by the Chairman and agreement by a majority of the Committee and the Subcommittees, meetings can be held elsewhere.

1.4.1.3 Quorum. A majority of the Committee and Subcommittee voting membership shall constitute a quorum for the transaction of the ordinary business of the Committee or Subcommittee.

1.4.2 Organization. The Committee shall be administered by a Chairman, a Deputy Chairman and an Executive Assistant.

1.4.2.1 In the event of absence of both the Chairman and the Deputy Chairman, the Executive Assistant shall temporarily preside until the Committee or Subcommittee shall elect a Chairman Pro-Tem, who shall have the duties and authority of the Chairman during the Chairman's absence.

1.4.3 Selection of Officers.

1.4.3.1 Chairman and Deputy Chairman. The Chairman and Deputy Chairman

shall be appointed by the Chairman of the Board of AHRI, for a term of two years and shall be eligible for reappointment.

1.4.3.2 Executive Assistant. The Assistant Vice President, Standards of AHRI shall appoint the Executive Assistant to the Standards Policy Committee (SPC), the Cooling Standards Subcommittee (CSS), and the Heating Standards Subcommittee (HSS).

1.4.4 Duties of the Chairman. The Chairman shall serve as the presiding officer at meetings of the Committee and the Subcommittees. In addition, the Chairman shall:

1. Appoint subcommittees as required to carry out the duties and functions of the Committee. It is recommended that in each such case the Chairman designate the Chairman of the Subcommittee.
2. Review and approve the distribution of minutes of meetings, as prepared by the Executive Assistant. The minutes are then subject to correction and approval by the Committee or the Subcommittee at the next meeting.
3. Represent the Committee before other groups except that he/she may delegate such representation to other qualified Committee or Staff members.
4. In matters of short notice, in his/her judgment, act on behalf of the Committee. Such actions shall be reported to the Committee not later than at its next meeting.
5. Report in person to the Board of Directors, on an annual basis.
6. Perform such additional duties as may be assigned by the Board of Directors, or by Committee or Subcommittee action.

1.4.5 Duties of the Deputy Chairman. The Deputy Chairman, during the absence of the Chairman, shall assume all the duties and functions of the Chairman, as outlined in 1.4.4. and shall perform such other duties as may be assigned by the Chairman, or by the Committee.

1.4.6 Duties of the Executive Assistants. The Executive Assistants shall serve as the administrator and recording secretary to the Standards Policy Committee (SPC), the Cooling Standards Subcommittee (CSS), the Heating Standards Subcommittee (HSS), and shall perform the following functions and shall provide for like services and functions for all AHRI technical committees. In addition, the Executive Assistants shall:

1. Provide liaison between the Committee and the Subcommittees and the AHRI Staff.
2. In cooperation with the Chairman, make arrangements for and carry on correspondence in connection with all Committee and Subcommittee meetings.
3. Act as secretary to all Committee and Subcommittee meetings.
4. Maintain records, and shall report to the Committee and the

Subcommittee meetings, as required, the status of all current business of the Committee and the Subcommittees.

5. Prepare an agenda, with the Chairman's assistance as necessary, including all necessary background material, for each meeting.

6. Provide to the engineering committees a checklist of items related to structure and format of all standards.

7. Provide for the proper sequence of actions on all proposed standards, guidelines and technical documents, leading to their approval by the applicable Subcommittee for publication. All records pertaining to the development of standards, guidelines and technical documents shall be available for inspection upon request.

8. Provide a check on specific data to ensure consistency among publications, and when unable to bring about such consistency shall so report to the Committee and Subcommittees for such action as the Committee and Subcommittee shall direct.

9. Check all actions and documents for conformance with policy and procedure set forth herein, and shall report deviation to the Committee and the Subcommittees.

10. Ensure that AHRI Staff is trained in the use of Appendix A and that Executive Assistant's distribute Appendix A to their respective Committees and Subcommittees.

11. Perform such other functions as the Committee and Subcommittees specifically assigns him/her.

1.4.7 Standard Policy Committee (SPC) Subcommittees. The Technical Committee on Sound (TCoS) and the Committee on Electrical Standardization report to the Standards Policy Committee (SPC). The Cooling Laboratory Liaison Committee reports to the Cooling Standards Subcommittee (CSS) and the Heating Laboratory Liaison Committee reports to the Heating Standards Subcommittee (HSS).

1.4.8 Continuity of Operations. AHRI has:

- a structure and available resources providing assurance on the stability and continuity of its operations;
- available information on its future plans regarding the development and maintenance of standards; and
- maintains expertise for the development and the maintenance of standards.

1.4.9 Staff Competence. AHRI shall have sufficient and competent staff to manage and support its standardization program and activities. Staff shall be knowledgeable about standardization, including related matters of principles, policies and techniques, as required.

1.5 Appeals.

Actions of the Standards Policy Committee (SPC) may be appealed to the Board of Directors.

Article 2. AHRI Policy on Standards, Guidelines and Technical Activities

2.1 General. It shall be the policy of AHRI to promulgate standards and guidelines that provide benefit to all segments of the industry and to the public. In carrying out this policy, AHRI shall ensure that none of its standards or guidelines tends to serve the interests of any special interest group, or restrict or discourage introduction and application of new or innovative products, or unnecessarily increase the price of equipment sold.

AHRI solicits and encourages meaningful outside participation in its standards writing process, and a procedure to consider complaints and comments received from those affected by its standards has been established. The use of an independent Appeal Board to consider appeals made to decisions reached through the AHRI complaint procedure has also been established. AHRI policy shall be to comply with the findings of the Appeal Board.

The Cooling Standards Subcommittee (CSS) and the Heating Standards Subcommittee (HSS) should base their approval or disapproval, or suggest modifications of proposed standards, guidelines, and technical documents on relevant factors. Sponsoring groups should: set forth the benefits to the industry and to the public; indicate their intent, if any, to implement the standards for certification and compliance programs and list the reasons; indicate whether publication will be by AHRI or under joint sponsorship; and submit comments pertinent to the particular project at hand.

2.1.1 Canadian Interest. The following primary objectives shall be considered as appropriate to the subject of the standard:

- Canadian economy;
- sustainable development;
- health, safety and welfare; and
- consumers.

2.1.2 Avoiding Duplication. AHRI will make every effort to avoid duplication or overlap with the work of other standards development organizations in the United States and Canada and with the work of relevant international and regional standards development organizations.

For the development of national standards of Canada (NSC's), this concept is known as subject area of responsibility as detailed in CAN-P-1006, *Granting and Maintenance of Primary Responsibility for Subject Areas*.

2.1.3 Place of Origin. Standards shall not be developed to discriminate among products on the basis of the place of origin. AHRI shall take action to resolve identified instances of unjustified discrimination, and remove the potential for future instances.

2.1.4 Price Fixing. Standards shall not be developed as a means to fix prices, nor to exclude competition or otherwise inhibit commerce beyond what is necessary to meet requirements of relevant technical regulations or other legitimate sectoral or local

requirements for compatibility, environmental protection, health and safety.

2.1.5 Protection Against Misleading Standards. AHRI shall ensure that its process to develop standards minimizes the possibility that the standards may be used to mislead consumers and other users of a product, process or service addressed by the standard.

2.1.6 Conflict of Interest. AHRI shall exercise due diligence to verify that committee members and AHRI staff involved in standards development have no conflict of interest in carrying out their roles and responsibilities on the committees.

2.1.7 Canadian Relevance. AHRI shall be actively developing and maintaining standards and demonstrate a standards interest of relevance to Canada. AHRI will communicate to the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI), the Canadian Standards Association (CSA), and the Standards Council of Canada, as well as the Canadian public, the dates and times of all AHRI standards development meetings. Interested Canadian stakeholders will be encouraged to attend and contribute at any and all AHRI standards development meetings. This includes those from user, producer, and general interest categories, as well as any other Canadian individuals with interest. AHRI will work with the chairmen of the AHRI engineering committees to add Canadians to its standards development committees. AHRI shall provide evidence to demonstrate Canadian relevance, which may include:

- the need for a standard in the Canadian marketplace;
- approves participation of Canadian experts in technical committees; and
- facilities in Canada with sufficient resources to meet requirements relevant to its standards development activities.

2.1.8 Consumers. AHRI develops standards to assist consumers by facilitating choice, promoting consistent design quality, and providing consumers with safer, healthier and more environmentally sound products and services.

2.1.9 Trade. AHRI develops standards that meet the needs of the marketplace and contribute to advancing trade in the broadest possible geographical and economic contexts. AHRI takes efforts to ensure that standards are developed so as not to create unnecessary obstacles to trade.

2.1.10 International Inquires on Code of Good Practice. AHRI shall afford sympathetic consideration to, and adequate opportunity for, consultation regarding representations made with respect to compliance with WTO/TBT Annex 3 presented by standardization bodies of the international community that have accepted the Code of Good Practice. AHRI shall make an objective effort to resolve any complaints.

2.2 Types of Standards Activities. As part of its function as a trade association, it is the policy of AHRI to develop:

- a. Testing, rating and performance standards for air-conditioning, heating, refrigerating and related products within the scope of AHRI product sections.
- b. Application standards, whenever such standards appear to be needed in the public interest.

2.2.1 Adoption or Sponsorship of Standards of Other Organizations. It is the further policy of AHRI to recognize the many advantages of participation by technical societies, by inviting said societies to sponsor and promulgate testing standards and codes, which AHRI may adopt or cosponsor. This policy is not rigid, and under suitable circumstances, AHRI may properly decide to develop or adopt, and promulgate such testing standards, with or without co-sponsorship of other organizations.

2.2.2 Preference for AHRI Standards. With the exception of the development of standard methods of testing for rating by technical societies (See 2.5), to the greatest extent possible it shall be the AHRI policy to establish and maintain testing, rating, performance and application standards developed by AHRI product sections rather than by other organizations.

2.2.3 Safety Markings. AHRI does not at this time develop safety standards and does not incorporate safety markings in any of its standards. AHRI requires a safety disclaimer statement on the inside front cover of its standards (see Appendix A for the specifics of this requirement).

2.3 Types of Technical Activities. As part of its function as a trade association, it is the policy of AHRI:

- a. To develop technical documents setting forth technical data, methods, practices, procedures, or theories related to the design, manufacture, rating, testing, application, installation, operation, maintenance, servicing, or recycling/disposal of air-conditioning, heating, or refrigeration products or systems.
- b. To provide AHRI committees or joint committees (with other groups such as technical societies, trade associations, government agencies and others) for the following purposes:
 1. To interpret AHRI standards, guidelines, or technical documents for use in standards, codes or specifications.
 2. To prepare technical documents for publication.
 3. To engage in such other allied activities as, in the judgment of the Standards Policy Committee (SPC), will carry out the proper functions of AHRI while benefiting the public.

To the greatest extent possible, it shall be the AHRI policy to carry on technical activities through groups appointed by product sections or by the Standards Policy Committee (SPC) of AHRI. This does not contradict or prevent working jointly with groups whose influence is recognized by AHRI, or by responsible segments of the industry, or by the agency or segment of the public served.

2.4 Relationship with Other Trade Associations. In the cases of equipment and application standards and technical documents, AHRI may cooperate with other trade associations in the development of these documents, provided such external activity does not conflict with AHRI's

own technical program, and where the fields of responsibility of the other organizations are clearly delineated and repetitions may be avoided.

2.4.1 Where other organizations write or propose standards covering subject matter similar to existing or proposed AHRI Standards, AHRI will attempt to reach agreement, through manufacturer members of the organization concerned, to establish authority for the writing of such standards by one of the organizations only.

2.4.2 Where other organizations write or propose technical documents or publications covering subject matter similar to existing or proposed AHRI documents, AHRI will attempt to reach agreement, by suitable procedures, to establish authority to publish a single document, either by one of the organizations or as a joint publication.

2.4.3 In the cases covered by 2.4.1 and 2.4.2, where AHRI writes the document, representation from the other organization(s), on an advisory basis, shall be invited. Similarly, where another organization writes the document, AHRI shall request representation, on an advisory basis.

2.5 Relationship with Technical Societies. AHRI recognizes the desirability of having testing standards, and certain application standards, written by qualified technical societies. Whenever an AHRI-authorized standard calls for a method of test or related material, the technical society within whose scope it falls will normally be invited to prepare the standard. If the society declines, or if the resulting standard is not yet available or not acceptable to AHRI, AHRI reserves the right to prepare and publish its own test method and related material as part of a standard or as a separate standard.

2.6 Basis for Initiation of ARI Standards and AHRI Technical Activities. Upon majority vote of the applicable product section or Standards Policy Committee (SPC) in cases where a product section is not applicable, engineering committees are assigned the task of developing standards, guidelines and technical documents as defined in this Policy.

2.7 Standards for Certification Programs. While the Standards Policy Committee (SPC) will serve as the supervisory body in the development and revision of standards that may be the basis of certification programs, the development and operation of certification programs is the responsibility of others.

2.7.1 Separation of Management Activities. AHRI demonstrates a clear separation of the management and policy-making functions of its certification activities from those of standards development through the following ways.

AHRI's organizational structure clearly separates the functions of standards and certification with the following division. Standards are managed by the Vice President, Standards and the Manager, Standards while certification is managed by the Vice President, Certification and his/her staff.

AHRI's bylaws separate the governance as follows: the Standards Policy Committee (SPC) and its subcommittees are responsible for standards and the Certification Programs and Policy (CP&P) Committee is responsible for certification.

The CP&P Committee and separate product specific compliance committees direct

certification development and operation, while totally separate engineering committees and canvass consensus bodies serve as the standards development committees.

2.8 Publication of AHRI Standards. AHRI standards, guidelines, etc., shall be published under direction of AHRI. AHRI may enter into agreements with others for joint publication or sponsorship of standards. AHRI shall notify the public that a standard has been completed and published by announcement on its website (www.ahrinet.org). Published standards may be commented on at any time, and such comments shall be referred to the responsible technical committee for consideration, as appropriate.

2.8.1 Joint Publication of Standards. AHRI may write and publish standards jointly with other organizations. Such standards shall be approved by the appropriate AHRI product sections and the Standards Policy Committee's (SPC's) pertinent Subcommittee. The AHRI name and logo shall appear on the cover of the standard. The copyright shall be held jointly by both sponsoring organizations and provide equal rights and control over the document. Each sponsoring organization would hold reproduction rights and would have the authority to grant third party reproduction rights without the consent of the other. However, if a request is declined by one organization, it would immediately advise the other of the circumstances surrounding the situation. Each sponsoring organization shall have full right of distribution to enable servicing of its respective members or clients. No modifications can be made to the standard without the consent of both parties, with the exception of sections which pertain only to one of the sponsoring organizations.

The format and content of the standard shall be mutually agreed upon by the sponsoring organizations. Location and cost of printing of joint standards shall be agreed upon by the Executive Assistant and the other organization.

2.9 References. AHRI will reference standards of other bodies whenever proper and feasible. Such references shall be only to a specific edition of the referenced standard.

2.10 Use of "Shall" and "Should"

- a. SHALL. Where "shall" or "shall not" is used for the provision specified, that provision is mandatory if compliance with the standard is claimed. (Since compliance is not involved in guidelines, "shall" must not be used in guidelines.)
- b. SHOULD. "Should" is used to indicate provisions in standards which are not mandatory, but which are desirable as good practice. (While there may be instances which warrant the use of "should," the standard development committees should consider carefully the use of this term. The use of "should" is appropriate for guidelines.)

2.11 Drafts of Standards and Other Technical Documents. While final approval of AHRI standards and other technical documents is based upon examination by either the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) of the final draft as approved by the Section or Subsection concerned, the Subcommittee may be requested to comment upon any intermediate draft. Where there is undue controversy over some provisions of a document, it is strongly recommended that as the document nears the final stage, each draft be submitted to the Subcommittee for its information and possible comment.

2.12 Record Retention Policy. AHRI's record retention policy for standards activities is as described below. Adherence to this policy is required. These records include all discussions, actions and votes taken regarding all work on AHRI standards and guidelines.

Standards records shall be retained for one complete standards cycle, or until the standard is revised or reaffirmed. Records concerning withdrawals of standards shall be retained for at least five years from the date of withdrawal.

2.13 Metric Policy. All AHRI standards and guidelines shall be written in "hard" rational SI units. Standards and guidelines shall either: (1) be converted to "hard" rational SI units or (2) dual standards shall be issued, one in "hard" rational SI units and one in "hard" rational I-P units.

Further details and examples are provided in Section 5 of Appendix A, *Format and Content Requirements for AHRI Standards*. The Standards Policy Committee (SPC) can grant exemptions from this policy.

2.14 Compliance with ANSI Patent Policy. AHRI complies with the ANSI patent policy that is included in the *ANSI Essential Requirements*. This patent policy restricts the inclusion of patented items in a standard unless the use of a patented item is justifiable for technical reasons and the rights holder agrees to negotiate licenses with interested applicants, wherever located, on reasonable terms and conditions. (See Appendix B for the specifics of this AHRI Patent Policy.)

2.15 Compliance with ANSI Commercial Terms and Conditions. AHRI complies with the ANSI commercial terms and conditions policy that is included in the *ANSI Essential Requirements*.

Article 3. Definitions

As used herein, the terms below are defined as follows:

3.1 Standard. A formal document, arrived at by formal process, which defines or designates a product(s), or specifies how to test a product and express the results as that product's performance.

- a. Performance rating requirements establish definitions, product classifications, test conditions and methods for expressing product performance in such terms as capacity, efficiency, etc., for use in specifications, literature and advertising.
- b. Performance operation requirements set forth criteria for selected aspects of the operation of a given class of equipment, some of which may be:

Ability to operate at voltages or frequencies other than those specified at its rated condition;

Ability to dispose of condensate;

Ability to operate under unfavorable ambient conditions.

- c. The testing requirement and method sets forth procedure(s) for measuring capacity, or other aspects of operation, of a specific unit or system of a given class of equipment, together with a specification of instrumentation, procedure, calculations and interpretation of results.

3.1.1 Rating Standard. A formal document which puts forth requirements in a manner that would permit certification which involves physical measurement and testing.

3.1.2 Application Standard. A formal document which uses physical measurements in conjunction with a rating standard to provide results at conditions different from rating standards.

3.2 Guideline. Guidelines are instructional documents which provide basic information and exclude anything which involves physical measurements or testing for mandatory compliance. Guidelines are developed under the same review procedures as standards and address equipment specification, materials, processes, or procedures and such things as terminology, nomenclature and instructional information. A guideline is not processed for ANSI approval.

3.3 Other Technical Documents. Other technical documents may include “white papers” which are AHRI’s expression of a position on a particular issue or a document of a technical nature such as an instructional document with basic information not covered by any of the above.

3.4 Published Rating. A published rating is a statement of the assigned values of those performance characteristics, under stated rating conditions, by which a unit may be chosen to fit its application. These values apply to all units of like nominal size and type produced by the same manufacturer. Examples of such performance characteristics include net refrigeration capacity, total power input, quantity rate of fluid flow, resistance to fluid flow, gross heat rejection effect, and heating capacity.

3.5 Rating Conditions. Rating Conditions are any set of operating conditions under which a single level of performance results and which cause only that level of performance to occur.

3.5.1 Standard Rating Conditions. Standard Rating Conditions are Rating Conditions, as specified and so designated in a rating standard, and used as the basis for comparison of performance characteristics.

3.5.2 Application Rating Conditions. Application Rating Conditions are Rating Conditions, other than Standard Rating Conditions. They may be established by the manufacturer in his/her technical publications, or by an engineering specification, or otherwise.

3.6 Standard or Guideline Development Committee. An engineering committee, subcommittee or ad hoc committee appointed by the group having authority to produce a standard, guideline or technical document, charged with the details of writing the document and presenting it for approval.

Article 4. Procedure of the Standards Policy Committee (SPC)

4.1 General. This section provides an outline of procedure to be followed for the types of projects requiring Standards Policy Committee (SPC) oversight or approval. Charts to illustrate the procedure for the processing of AHRI standards are provided in Figures 1, 2 and 3.

4.1.1 References to Certification or Administrative Requirements. Administrative requirements relating to conformity assessment and marks of conformity or other non-technical issues shall be presented separately from technical and/or performance requirements.

4.1.2 Standards for Conformity Assessment. Standards intended for conformity assessment shall contain a clear statement to that effect in the introductory pages of the standard (see Appendix A for the specifics of this requirement). Standards shall be based on requirements that are stated to the extent possible in measurable terms, and the basis for such requirements shall be provided.

4.2 Monitoring. The Standards Policy Committee (SPC) shall monitor each project undertaken. The steps involved are indicated in Section 5.

4.3 AHRI Standards and Guidelines; AHRI External Standards; ANSI/AHRI Standards. The Standards Policy Committee shall maintain liaison and be kept informed concerning all AHRI generated technical documents.

4.3.1 Liaison. The appropriate Executive Assistant shall maintain liaison between the standard development committee and the Standards Policy Committee (SPC) and its Subcommittees. This Executive Assistant shall attend meetings on the standard development committee, serve as its secretary, report on its progress and press for the necessary action to complete the project at the earliest practicable date.

4.3.2 Progress Reports. At each meeting of the Standards Policy Committee (SPC) and its Subcommittees, the SPC Executive Assistant shall render a report on the current status of all AHRI external standards and all AHRI standards and guidelines under development.

At least once every six (6) months, AHRI shall publish a work program available for review on the AHRI website at www.ahrinet.org. AHRI shall notify the Standards Council of Canada (SCC) at the time of publication of its work program.

AHRI uses the ISONET development stage code system.

4.3.3. Engineering Committee. The responsible Section or Subsection's Engineering Committee serves as the body that develops the standard. Its chairman is appointed by the chairman of the responsible Section or Subsection. Following approval of a draft of the standard by the Engineering Committee, the Chair of the Engineering Committee shall present the draft to the responsible Section or Subsection for approval or for return to the Engineering Committee with instructions regarding further work on the standard.

4.3.3.1 Engineering Committee, Section, Subsection, or Multi-Section Approval. Approval of the draft of a standard, guideline or interpretation by an engineering committee, section, subsection, or group of sections shall require an affirmative vote of two-thirds of the total membership less abstentions.

In addition, all sound standards and guidelines shall be approved by two-thirds vote of the Technical Committee on Sound and electrical standards shall be approved by a two-thirds vote of the Committee on Electrical Standardization prior to submission to the section.

All revisions to a document, completed subsequent to approval by the Technical Committee on Sound, the Committee on Electrical Standardization, and/or any other Section/Subsection with single or multiple cognizance, shall be reviewed by the Chairman or the AHRI Executive Assistant of the document drafting body for editorial/substantive content. In addition, the Deputy Chairman of the document drafting body shall review and agree with the decisions regarding the editorial/substantive content of revisions made by the Chairman and the AHRI Executive Assistant.

Revisions which have been deemed substantive by the Chairman, Deputy Chairman and AHRI Executive Assistant shall be forwarded to the Technical Committee on Sound, Committee on Electrical Standardization or other Section/Subsection for approval, before being submitted to either the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS).

4.3.3.2 Letter Ballot. A letter ballot may be employed in the absence of a meeting of the above groups.

- a. Approval of a draft of a standard or guideline by an engineering committee, section, or sub-section shall require an affirmative vote by two-thirds of the total membership of the committee, section, or sub-section.
- b. Failure to vote on a letter ballot within the time indicated shall be construed as an abstention; such an abstention will be subtracted from the total membership to determine the necessary percentage for approval.
- c. Any negative votes on a letter ballot with substantive comments (other than minor editorial) shall require that the comments be circulated to the members of the group and rebaloted. Disputes as to whether comments are substantive shall be resolved by the Chairman of either the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS).

4.3.4 Approval by Either the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS). When a draft of a standard or guideline has received approval of the responsible product section, either the Cooling Standards Subcommittee

(CSS) or the Heating Standards Subcommittee (HSS) Executive Assistant shall present it to either the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) for approval, or for return to the product section with instructions regarding further action.

4.3.4.1 The Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) Executive Assistant shall present, with each standard or guideline submitted to the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) for approval, a statement indicating the degree of conformance of the standard or guideline with the policies and procedures herein set forth, and stating fully any deviations or special features contained in the standard or guideline. The Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) Executive Assistant shall also include a report of the number of votes for and against adoption by the responsible group.

4.3.4.2 Section Responsibility. Responsibility for technical details lies with the product section concerned. However, either the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) may take necessary steps to establish that the responsibility has been met.

4.3.4.3 Cooling Standards Subcommittee (CSS) and Heating Standards Subcommittee (HSS) Approval. Approval for publication of a standard, guideline or interpretation by either the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) in a meeting shall require a two-thirds majority of the membership of the Committee less abstentions. Voting shall be completed by letter ballot, if necessary. Failure to vote by letter ballot shall be construed as an abstention. Each negative vote and submitted abstention must be accompanied by a reason(s) and the draft returned to the group from which it came, with instructions regarding further procedures.

Standards, guidelines or interpretations may be submitted to the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) for letter ballot without major discussion at a meeting at the discretion of the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) Executive Assistant with the concurrence of the Chairman of the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS). In this case, discussion at a meeting can be mandated by a request for such a meeting on this letter ballot.

4.3.5 Instructions Following Disapproval. In any group voting on approval of a draft of a standard, guideline or interpretations each negative vote must be accompanied by reason(s) therefore, and the draft returned to the group from which it came, with instructions regarding further procedure. An abstention should be accompanied by a reason(s).

4.4 External Standards. If a proposed standard development is to be approved and classified as an external standard, cooperative standard, or ANSI standard, the Standards Policy Committee (SPC) will appoint the AHRI representative(s) to the standard project committee and shall maintain liaison and be kept informed on progress of the project until its completion. (See 4.6.)

4.4.1 Liaison. The Executive Assistant shall maintain liaison between the AHRI representative and the Standards Policy Committee (SPC). The Executive Assistant shall keep the representative informed of duties and will supply all possible information for use.

4.4.2 Progress Reports. AHRI representatives on external standard development committees, following each meeting or other action of the standard project committee, shall make progress reports to the Executive Assistant for transmittal to the Standards Policy Committee (SPC) at its following meeting.

4.4.2.1 Work Program. AHRI develops an AHRI Work Program which is updated and published at least once every six months. The Work Program includes the standards AHRI is currently preparing, the standards AHRI has published in the preceding period, the classification relevant to the subject matter according to the International Classification for Standards (ICS), and the development-stage based on the ISO/IEC stage identification system. A notice of the Work Program publication will be provided to the Standards Council of Canada (SCC) and announced on the AHRI website (www.ahrinet.org).

4.4.3 Voting Instructions. AHRI representatives on external standard development committees may use their best information and judgment in voting on preliminary drafts and other details or preparation of standard. However, they may at any time, and shall when voting on the final draft of acceptance of a standard, make a report to and request instructions from the Standards Policy Committee (SPC) before voting.

Such report and request for instructions shall be made through the Executive Assistant, who will handle the details and keep the records.

4.4.3.1 Notice of Need for Instructions. The period of balloting is usually limited. It is in general known to the AHRI representative whether or not any points, controversial in the eyes of AHRI, will be proposed in the final draft. In such cases, the representative is requested to present the problem to the AHRI Staff member serving as alternate at the earliest opportunity, together with all possible information, any recommendations for action and a request for instruction regarding the position he/she should assume. This will permit the Standards Policy Committee (SPC) to refer to such other sources as it deems advisable for further information and recommendations, prior to instructing the delegate regarding the AHRI vote.

4.4.3.2 Where time does not permit presentation of the problem to a meeting of the Standards Policy Committee (SPC), the representative, in conference with the Chairman and the Executive Assistant, shall agree on the action to take. The members of the Standards Policy Committee (SPC) will then be notified of the action with a stated deadline by which to submit any comments.

4.4.3.3 Voting on Matters Outside the Interest of AHRI. In cases where representatives are asked to vote on matters outside the interests of AHRI, they shall record themselves as “present but not voting” or, in the case of letter ballots, “acknowledged but not voting.” An exception to this policy will be the case

where the question at hand involves not a technical consideration, but the question of correctness of procedure, adherence to the policies of the responsible organization and the like. In such cases, the AHRI representative will vote in accordance with his/her own judgment.

4.5 Cooperative Standards. These projects are similar to, and are handled in the same manner as, external standards except that they do not come before the Standards Policy Committee (SPC), for adoption as AHRI standards.

4.6 AHRI Representatives on External Standards Committees. AHRI representatives on external committees represent AHRI as a whole. Most projects of this type will cover the subject matter of one product section or other sub-division of AHRI; however, some projects will be of interest to several sections. AHRI should request sufficient representatives, or representatives and alternates, to afford representation to each sub-division affected.

4.6.1 Nominations and Appointments. Recommendations to the Standards Policy Committee (SPC) for representation on external and cooperative standards project committees shall be accompanied by nominations by the Chairman of product section(s) or committee(s) of interest. The Standards Policy Committee (SPC) will give consideration to such nominations, but is not bound by them.

4.6.2 Term of Appointment. The AHRI representative(s) on an external standard committee serves for the duration of the project, or until discharged by the Standards Policy Committee (SPC).

4.6.3 Discharge. If an AHRI representative to an external standard, guideline, or technical committee becomes incapacitated or is otherwise prevented from carrying out his/her responsibilities, the Standards Policy Committee (SPC), with due notice, may discharge the representative, and name a new representative in his/her place.

4.6.4 Representation of Other Organizations. Because of possible conflicts of interest, an AHRI representative shall not represent another organization on the same external committee on which he is serving as the representative of AHRI.

4.6.5 Attendance at Meetings. An AHRI representative on an external committee should attend all meetings and participate in all activities of that committee, except when it has been ascertained that there will be no agenda items of interest to AHRI.

4.6.6 Discharge of Representatives on External Committees. Upon termination of the project for which an external committee was formed or upon discharge of the committee by the organization having jurisdiction, the AHRI representative, through the Executive Assistant, shall notify the Standards Policy Committee (SPC). The Committee (through the Chairman) shall then discharge the AHRI representative, with suitable acknowledgment of the services rendered.

4.6.7 Insufficient Attendance of Meetings. When, in the opinion of the Standards Policy Committee (SPC), the AHRI representative on an external committee has not participated, by attendance at meetings or otherwise, to a sufficient extent, the Standards Policy Committee (SPC) may discharge the representative and appoint another in his/her

place.

4.7 Review of Standards and Technical Publications. The Executive Assistant shall keep records of revisions of referenced publications, advances in the art and other information concerning AHRI guidelines and technical publications as they come to the attention of AHRI. When such information warrants, it shall be brought to the attention of the AHRI product section involved for consideration of revision of affected publications.

Article 5. Procedures for Development of, Revision to, Interpretation of,
or Discontinuation of AHRI Standards and Guidelines

5.1 Sources of Requests (See Figure 1). Initiation of the development of, revision to, interpretation of or discontinuation of an AHRI standard or guideline occurs when a request for such action from any source is directed to the Standards Policy Committee (SPC) Executive Assistant.

When considering the withdrawal of a standard, AHRI shall notify the impacted Canadian government departments (whether municipal, provincial, territorial or federal) in a timely fashion. AHRI shall notify the Standards Council of Canada (SCC) when it has decided to withdraw a standard.

Withdrawn standards shall be removed from all listings of active standards.

5.1.1 The Standards Policy Committee (SPC) Executive Assistant will refer requests received along with his/her comments to the appropriate AHRI product section or the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) for consideration and recommendation.

5.1.2 The Engineering Committee assigned to prepare or revise a standard or guideline shall do so within the approved scope and return it to the section for review. The section may approve the document, or return it to the engineering committee with comments for revision.

5.1.2.1 To enable a consensus process from the beginning, AHRI will communicate to the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI), the Canadian Standards Association (CSA), and the Standards Council of Canada, as well as the Canadian public, all AHRI standards development meeting information. Interested Canadian stakeholders from all interest categories are encouraged to participate. The Engineering Committee chairman shall work to add Canadians to the Committee.

At the completion of the process, AHRI will submit evidence of consensus for each Canadian National Standard (CNS) for which AHRI seeks approval. AHRI shall follow the requirements of Part 2, Requirements for the *Approval of National Standards of Canada* of the SCC Publication CAN-P-1:2012.

5.1.3 Upon approval by AHRI section, the approved standard or guideline shall be forwarded to the AHRI Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) for approval. The Cooling Standards Subcommittee (CSS) or the

Heating Standards Subcommittee (HSS) may approve the document, or return it to the section with comments for revision.

If returned for revision, the section shall be provided with at least the following:

- a. The voting results of either the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS).
- b. A detailed rationale for the recommended revisions.
- c. A report of the position of either the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) members who voted in the minority, if the vote is not unanimous.

If the section objects to the revisions directed by either the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS), the section should present its objections to either the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) for consideration. If this does not resolve the issue, the section may appeal to the AHRI Board of Directors, in which case, any actions directed by the Subcommittee shall be deferred until the Board has made a decision.

In a case where either the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) decides to take final action approving or disapproving a standard for publication, any member of the committee may appeal such decision to the AHRI Board of Directors if the Board has not previously heard and acted on an appeal relating to the subject under consideration.

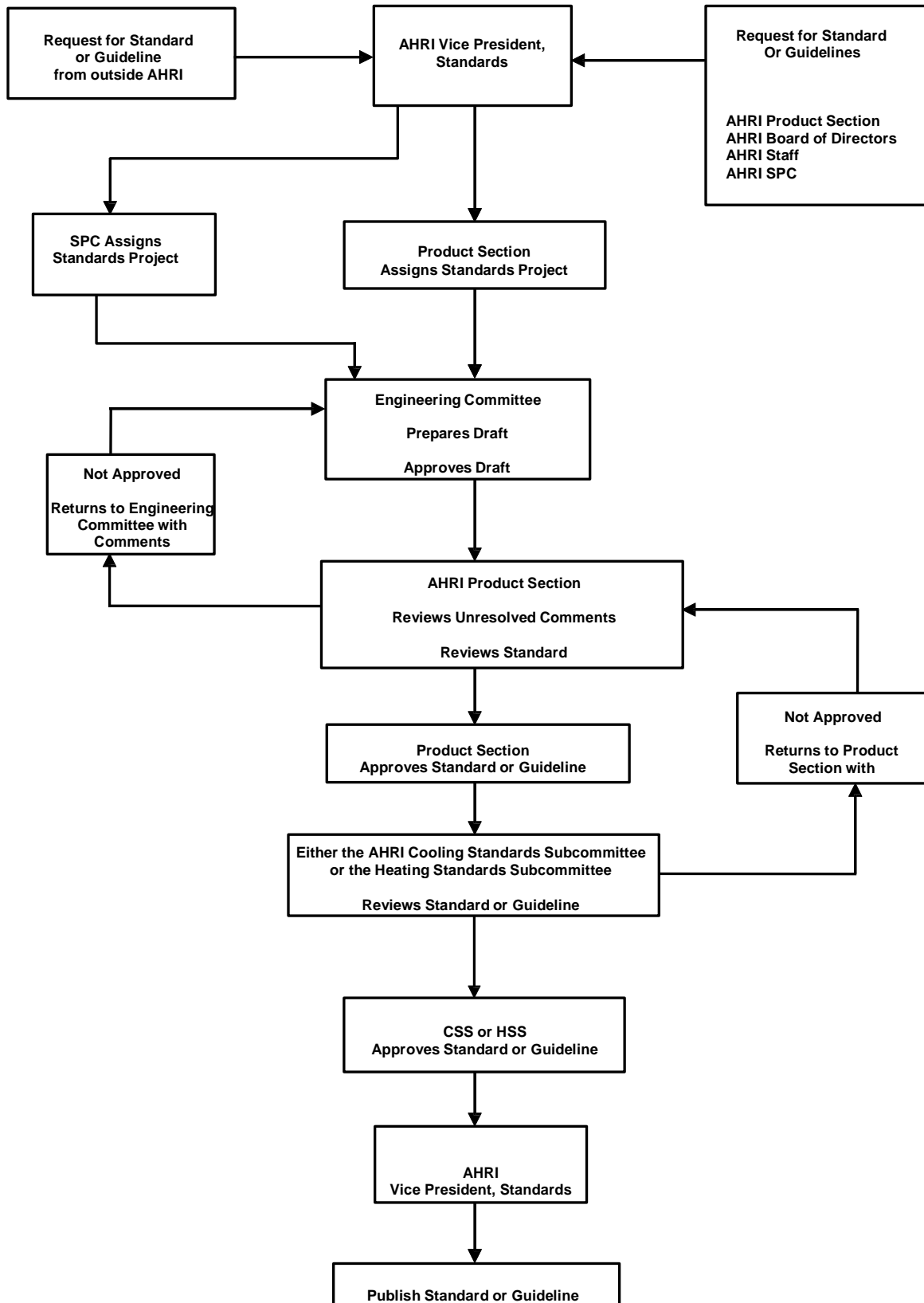


Figure 1. Procedure to Develop, Revise, or Withdraw AHRI Standards and Guidelines

5.2 Outside Representation in the AHRI Standards Writing Process. Non-voting participation in the development, revision, or withdrawal of AHRI standards and guidelines shall be invited from concerned and interested groups and individuals such as manufacturers, trade organizations, technical societies, professional associations, associations representing users or owners of the equipment involved, appropriate government agencies or offices and consumer organizations or private individuals known to have an interest in the product involved.

5.2.1 These groups and individuals, along with persons requesting notice will, as subscribers to AHRI's *AHRI Update*, be notified by an announcement in the AHRI monthly publication, *AHRI Update*. A notice will be posted on AHRI's website when the publication cycle of *AHRI Update* will not permit the announcement to be received at least ten (10) days prior to the meeting. It can be expected that groups will keep their own interested members informed.

When beginning the process of developing or adopting a new standard, new edition, addendum (amendment), reaffirmation or withdrawal of an already published standard, AHRI shall notify the public by announcement on its website (www.ahrinet.org).

At standards and guidelines development meetings, all outside participants will be given opportunity to make comments, participate in discussions and review pertinent data and information.

5.2.2 At the Engineering Committee meeting, all parties will be given an opportunity to comment either verbally or in writing on the proposed draft. The standards and guidelines development committee is encouraged to effect revisions in the proposed standard at the meeting in order to obtain the broadest possible consensus. At the conclusion of the meeting, the Executive Assistant will formulate the final draft for approval by the Engineering Committee and then forward it to the section for approval. The Engineering Committee shall also provide a summary of all comments and dissenting opinions not resolved at its meeting. This information shall be considered by the product section in its deliberation on approval.

5.2.3 The Chairman of the AHRI Cooling Standards Subcommittee (CSS) and the Heating Standards Subcommittee (HSS) shall call periodic meetings of the Subcommittee for the consideration of standards actions taken by sections subsequent to its last meeting.

In cases where a standard or guideline is written, revised, or withdrawn, without resolution of comments, the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) shall direct the Executive Assistant to make a full explanation to the person making the comments.

5.3 AHRI Interpretation Procedure. When an interpretation of a standard or guideline or any part of a standard or guideline is requested as described in 5.1, it will be assigned to the committee or sub-section responsible for developing the standard and subject to approval of the responsible engineering committee section and the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS). All requests for interpretations must be made in writing. The Executive Assistant shall acknowledge receipt of the request within ten days, and

shall evaluate the urgency of the interpretation and proceed accordingly. Voting for approval of an interpretation shall be in accordance with 5.1.2 and 5.1.3. When issued, the interpretation shall be published in the next issue of the *AHRI Update*. The interpretation will be subject to the same AHRI Complaint Procedure and Standards Appeal Procedure as in 5.4 and 5.5.

5.4 AHRI Dispute Resolution Process - Complaint Procedure (See Figure 2). A complaint concerning an AHRI standard, guideline or interpretation from any source either inside or outside of AHRI will be directed to the AHRI Assistant Vice President, Standards. The Executive Assistant will acknowledge receipt of the complaint within ten (10) working days and submit it to the AHRI Standards Policy Committee (SPC) for consideration and appropriate action.

The Standards Policy Committee (SPC) may direct the Executive Assistant to respond to the complainant. Alternately, the Standards Policy Committee (SPC) may request comment from the appropriate AHRI section, which in turn may request comment from its Section Engineering Committee. Based on such comment from the AHRI Section and the Engineering Committee, the AHRI Standards Policy Committee (SPC) shall develop a response to the complainant. If the Standards Policy Committee (SPC) rejects the complaint, a full explanation of the AHRI position and a notice of the existence of the Appeal Board shall be sent to the complainant. If it accepts the complaint, the Standards Policy Committee (SPC) directs that an AHRI standard, guideline, or interpretation be developed, revised, or withdrawn, and so notifies the complainant.

5.5 AHRI Dispute Resolution Process - Standards Appeal Procedure (See Figure 3). A complaint concerning an AHRI standard will normally be resolved in the AHRI complaint procedure. However, if the response by the AHRI Standards Policy Committee is unacceptable to the complainant, an appeal may be made to the Appeal Board for AHRI Standards.

Persons who have directly and materially affected interests and who have been or may be adversely affected by a procedural action or inaction of the consensus body shall have the right to appeal. Procedural complaints include whether a technical issue was afforded due process.

5.5.1 Appellant Complaint. The appellant shall file a written complaint with the Executive Assistant within thirty days after the date of notification of action or at any time with respect to inaction. The complaint shall state the nature of the objection(s) including any adverse effects, the section(s) of these procedures or the standard that is at issue, actions or inactions that are at issue, and the specific remedial action(s) that would satisfy the appellant's concerns. Previous efforts to resolve the objection(s) and the outcome of each shall be noted.

5.5.2 Response. Within thirty days after receipt of the complaint, the respondent (SPC Chair or SPC representative) shall respond in writing to the appellant, specifically addressing each allegation of fact in the complaint to the extent of the respondent's knowledge.

5.5.3 Hearing. If the appellant and the respondent are unable to resolve the written complaint informally in a manner consistent with these procedures, the Executive Assistant shall schedule a hearing with an Appeal Board on a date agreeable to all participants,

giving at least ten working days notice.

5.5.4 Appeal Board. The Appeal Board shall consist of three individuals appointed by the SPC Chairman who have not been directly involved in the matter in dispute, and who will not be materially or directly affected by any decision made or to be made in the dispute. At least two members shall be acceptable to the appellant and at least two shall be acceptable to the respondent.

5.5.5 Conduct of the hearing. The appellant has the burden of demonstrating adverse effects, improper actions or inactions, and the efficacy of the requested remedial action. The respondent has the burden of demonstrating that the consensus body and the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) took all actions in compliance with these procedures and that the requested remedial action would be ineffective or detrimental. Each party may adduce other pertinent arguments, and members of the Appeal Board may address questions to individuals. *Robert's Rules of Order* (latest edition) shall apply to questions of parliamentary procedure for the hearing not covered herein.

5.5.6 Decision. The Appeal Board shall render its decision in writing within thirty days, stating findings of fact and conclusions, with reasons therefore, based on a preponderance of the evidence presented to the Appeal Board. Consideration shall be given to the following positions, among others, in formulating the decision:

- a) Finding for the appellant, remanding the action to the consensus body or the Standard Policy Committee (SPC) with a specific statement of the issues and facts in regard to which fair and equitable action was not taken;
- b) Finding for the respondent, with a specific statement of the facts that demonstrate fair and equitable treatment of the appellant and the appellant's objections;
- c) Finding that new, substantive evidence has been introduced, and remanding the entire action to the consensus body or the Standard Policy Committee (SPC) for appropriate reconsideration.

5.5.7 Appeal to the Standards Council of Canada (SCC). The final AHRI decision on an appeal may be appealed within 90 calendar days to SCC's Chief Executive Officer.

5.6 Regular Review. Each published standard, guideline, or technical document of AHRI, not later than five years following its publication, shall be reviewed by the section(s) or subsection(s) responsible for its publication. This review shall be followed by a vote to determine whether the publication will be reissued, revised, or withdrawn. AHRI Staff will be responsible for ensuring that all standards and guidelines are so reviewed at no greater than five-year intervals.

5.6.1 Addenda (Amendments). An addendum (amendment) shall meet the following conditions:

- Maximum of three addenda (amendments) within the established timeline of the standard; and
- Changes do not exceed one-third of the pages of the technical content of the standard.

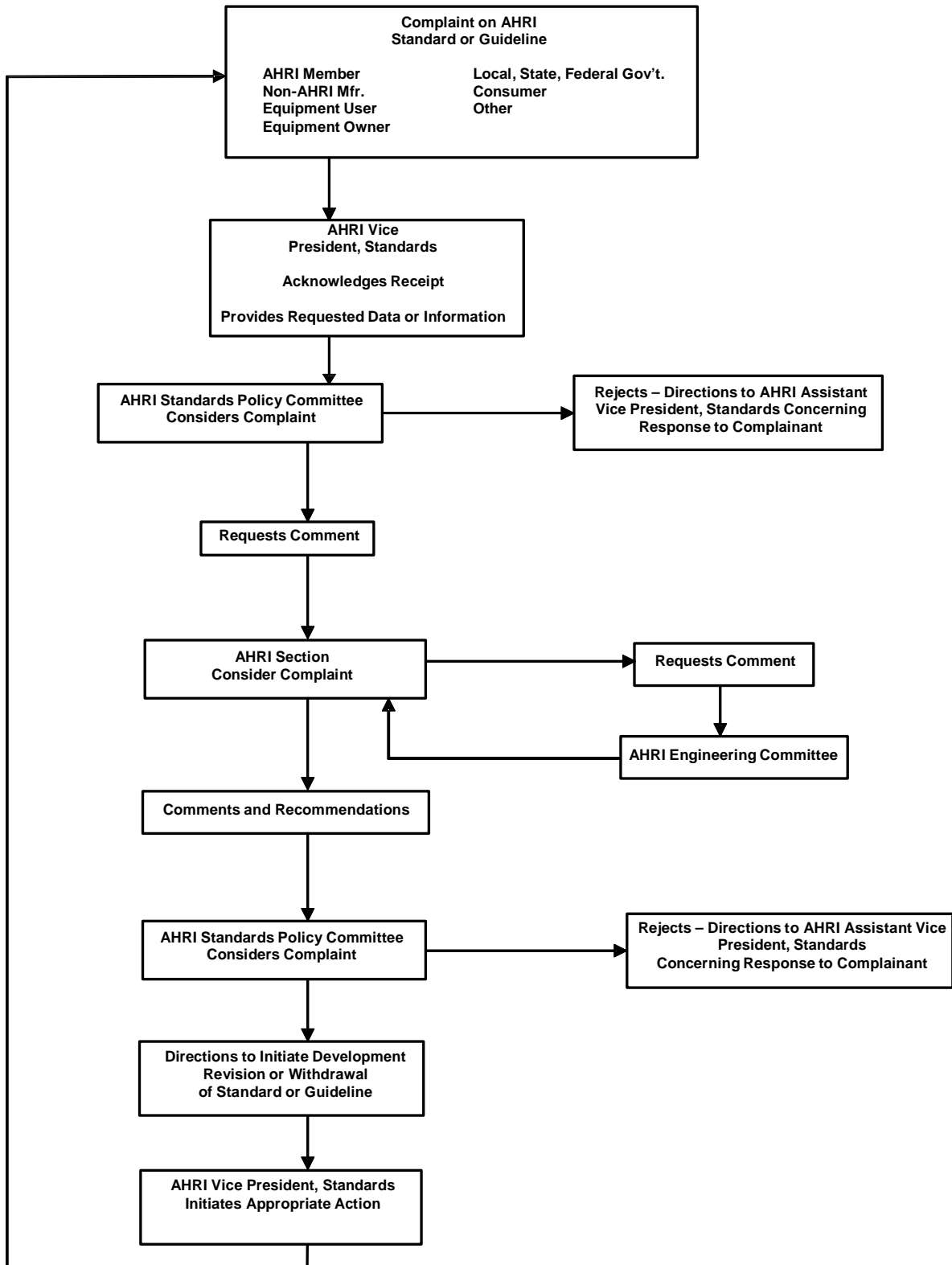


Figure 2. Complaint Procedure Involving AHRI Standards and Guidelines

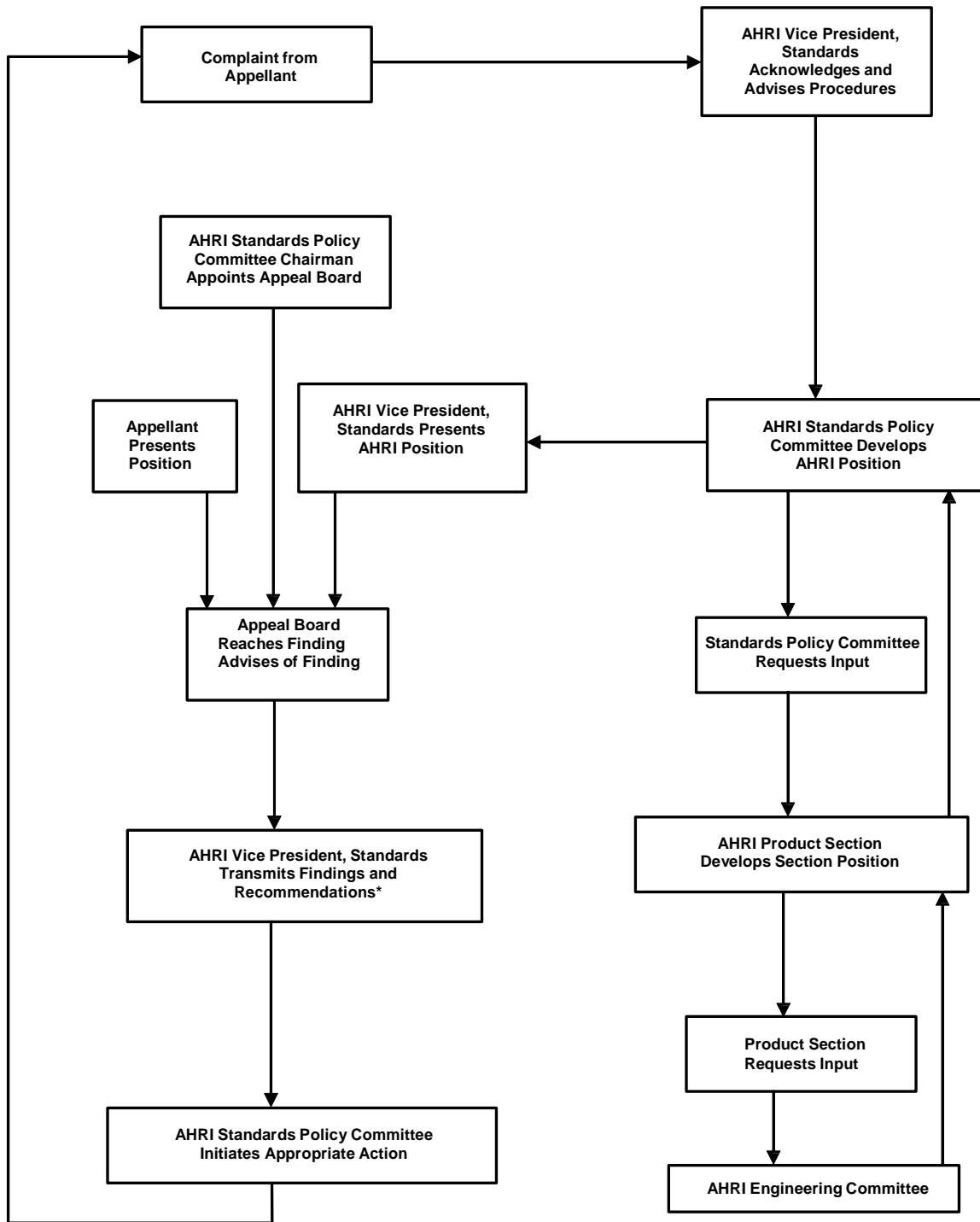


Figure 3. Appeal Procedure for AHRI Standards and Guidelines

*The final AHRI decision on an appeal may be appealed within 90 calendar days to SCC's Chief Executive Officer.

5.7 Publication Procedure. Following approval by either the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) to issue or reissue a standard or technical document, the Executive Assistant shall be responsible for the details of publication under new date, announcements and distribution to interested groups and individuals. AHRI standards and guidelines may be made available at no charge from AHRI's website.

5.8 Procedure for Technical Activities. Following approval by the Standards Policy Committee (SPC) to initiate a technical activity (other than a technical document) the following shall apply:

5.8.1 Liaison. An Executive Assistant (or an authorized engineering staff member) shall maintain liaison between the standard development committee and the Standards Policy Committee (SPC). This Executive Assistant shall attend meetings of the standard development committee, serve as its secretary, report on its progress and press for the necessary action to complete the project at the earliest practicable date.

5.8.2 Progress Reports. At each meeting of the Standards Policy Committee (SPC), the Executive Assistant shall render a report on the current status of all active technical committees.

5.9 Procedure for Approval of Standards as American National Standards (ANS's) and as Canadian National Standards (CNS's) - (see Figure 4)

5.9.1 General. These procedures constitute AHRI's canvass method of developing evidence of consensus for the approval, reaffirmation, revision, or withdrawal of American National Standards. AHRI has adopted these procedures and is accredited by the American National Standards Institute (ANSI) as a standards developer. Further, AHRI's procedures embody all of the requirements found in the latest edition of the *ANSI Essential Requirements*.

Notification of standards activity shall be announced in suitable media as appropriate to demonstrate the opportunity for participation by all directly and materially affected persons. At the initiation of a project to develop or revise an American National Standard, notification shall be transmitted to ANSI using the Project Initiation Notification System (PINS) form, or its equivalent, for announcement in *Standards Action*. A statement shall be submitted and published as part of the PINS announcement that should include: (a) an explanation of the need for the project; and (b) identification of the stakeholders likely to be directly impacted by the standard. If the response to sub-section (b) changes substantively as the standard is developed, a revised PINS shall be submitted and published. A PINS form may be submitted, but is not required, at the initiation of a project to reaffirm or withdraw an American National Standard. Comments received in connection with a PINS announcement shall be handled in accordance with these procedures.

5.9.2 Development of Canvass List.

5.9.2.1 AHRI shall develop a list of potential canvasees consisting of those organizations, companies, government agencies, standards developers, individuals, etc., known to be, or who have indicated that they are, directly and materially affected by the standard. AHRI shall meet the ANSI requirements regarding lack of dominance. No individual shall represent more than one canvasee.

Specifically, participants shall be sought from diverse interest categories, with the objective of achieving balance. No single interest category shall constitute a majority of the membership of the consensus body. In defining the interest categories appropriate to a standard, consideration shall be given to at least the following: (1) producer, (b) user, and (c) general interest. Where appropriate, additional interest categories should be considered. Interest categories shall be discreetly defined, cover all materially affected parties, and differentiate each category from the other categories. Such definitions shall be available upon request.

For Canadian National Standards (CNS's), AHRI shall provide for balanced representation of interest categories, typically general interest, producers, regulators and users. This shall reflect the Canadian interest.

AHRI often uses the following interest categories for determining balance: (1) Consumer/Directly Affected Public – typically considered User, (2) General Interest – typically considered General Interest, (3) Manufacturer – typically considered Producer, (4) Professional Society – typically considered General Interest, (5) Regulatory Agency – typically considered User, (6) Testing Laboratory – typically considered General Interest, and (7) Trade Association – typically considered Producer.

Where appropriate, additional interest categories are utilized to address directly affected and interested parties.

5.9.2.2 In order to determine if potential canvasees are interested in participating, AHRI should conduct a pre-canvass interest survey, in which AHRI informs the potential canvasees in writing about the use of the canvass method for developing evidence of consensus, and, if the potential canvasees are interested in participating, obtains an appropriate interest category classification. AHRI's letter shall contain the title, designation, scope, description of the standard along with the history of its development, purpose and intended application of the standard, and an explanation of the ANSI function. The time for response shall be at least 30 days from the date of AHRI's letter and shall be so noted in the letter. All those who have agreed to participate shall be included on the canvass list, together with their agreed-upon interest categories. In addition, the affiliation and interest category of each member of the consensus body shall be made available to interested parties upon request.

Affiliation refers to the entity that the consensus body member represents (which may or may not be that person's employer). If the consensus body member is serving in an individual capacity, then the name of the individual, that person's employer and interest category should be available. Contact information is not required.

Once an interest survey has been completed for a standard, it need not be repeated for subsequent balloting of the document. In addition, AHRI may conduct a single interest survey for a group or category of standards. A canvasee who has indicated a desire to be on AHRI's canvass list for a particular category or categories of standards shall receive the draft document(s), letter ballot(s), and all appropriate information pertaining to 5.9.4.2 and 5.9.5.

5.9.3 Announcement of Canvass Initiation.

AHRI shall request (via the PINS form) that ANSI announce the initiation of canvass in *Standards Action* to elicit additional canvasees. This announcement shall include a statement that the canvass list is available upon request from AHRI, or alternately, a URL address where an electronic version of the canvass list is posted.

The review period shall be thirty days from the date of publication. Any resulting proposals for addition to the canvass list shall be referred directly to AHRI.

5.9.4 Conduct of Canvass.

5.9.4.1 AHRI may begin to conduct the canvass at any time , but canvasees subsequently added to the canvass list shall have the same amount of time to respond as do the other canvasees.

5.9.4.2 AHRI shall transmit, at minimum, the following information to all canvasees and other interested parties so requesting unless AHRI has previously supplied this information:

- a) the purpose and intended application of the standard;
- b) a brief history and explanation of how the standard was developed;
- c) a copy of the canvass list, consisting of the name, affiliation, and category of interest of each canvasee;
- d) a copy of the complete proposed American National Standard or the relevant portion under consideration when the canvasee has previously received the complete standard;
- e) official letter ballot(s) to all canvasees.

Upon request, AHRI shall provide to the canvasee a reasonable number of

copies or an electronic copy of the document being considered, to allow for a speedy determination of position by the canvasee. Should the document contain material that is not to be considered for approval as an American National Standard, such as an introduction or annex, a clear statement shall be included indicating those portions of the standard that are to be considered for approval by ANSI.

The ballot form used by AHRI shall provide opportunity for the canvasee to indicate its position (i.e., affirmative; affirmative, with comment; negative, with reasons (the reasons for a negative vote shall be given and if possible should include specific wording or actions that would resolve the objection); and abstain. A written follow-up within ten days of the close of the ballot shall be sent to canvasees not responding. The canvass ballot may be closed at the end of thirty days or sooner if all canvasees have responded. An extension of up to thirty days shall be granted upon request from any canvasee giving a legitimate reason.

Those not on the canvass list who have a direct and material interest in the standard have an opportunity to participate in the review of the standard during the public review process, announced in *Standards Action*.

5.9.4.3 Approval of a new standard, revision or reaffirmation of an existing standard, or an addendum to part or all of an existing standard shall require approval by at least a majority of the canvass list and at least two-thirds of those voting, excluding abstentions.

5.9.4.4 Proposals for new American National Standards and proposals to revise, reaffirm, or withdraw existing American National Standards shall also be transmitted to ANSI for listing in *Standards Action* for comment. AHRI shall determine whether such listing shall be concurrent with the canvass and whether announcement of the proposed action in other suitable media is appropriate. AHRI shall transmit a copy of the proposed new, revised, or reaffirmed standard to the administrator(s) of the appropriate USA Technical Advisory Group(s) at the same time.

5.9.4.5 Views and objections resulting from the canvass (5.9.4.2 and 5.9.4.3) shall be dealt with in accordance with 5.9.5.

5.9.5 Disposition of Views and Objections.

Prompt consideration shall be given to the written views and objections of all participants, including those commenting on either the PINS announcement or public comment listing in *Standards Action*.

5.9.5.1 PINS Announcement Comments.

If AHRI receives written comments within 30 days from the publication date of a PINS announcement in *Standards Action*, and said comments assert that a

proposed standard duplicates or conflicts with an existing American National Standard (ANS) or a candidate ANS that has been announced previously in *Standards Action*, a mandatory deliberation of representatives from the relevant stakeholder groups shall be held within 90 days from the comment deadline. Such a deliberation shall be organized by AHRI and the commenter and shall be concluded before AHRI may submit a draft standard for public review. If the deliberation does not take place within the 90-day period and AHRI can demonstrate that it has made a good faith effort to schedule and otherwise organize it, then AHRI will be excused from compliance with this requirement. The purpose of the deliberation is to provide the relevant stakeholders with an opportunity to discuss whether there is a compelling need for the proposed standards project. The outcome of such a deliberation shall be conveyed in writing by AHRI and commenter (ideally as a joint submission) to the Board of Standards Review (BSR) for consideration should AHRI ultimately submit the related candidate standard to ANSI for approval. While the outcome is not binding, participants are encouraged to develop a consensus on whether and how the standards development project should proceed.

5.9.5.2 Public Review and Consensus Body Comments.

In connection with an objection articulated during a public comment period, or submitted in connection with a vote, an effort to resolve all expressed objections shall be made, and each objector shall be advised in writing (including electronic communications) of the disposition of the objection and the reasons therefore. If resolution is not achieved, the objector shall be informed in writing that an appeals process exists within procedures used by AHRI. In addition, each objection resulting from public review or submitted by a member of the consensus body, and which is not resolved must be reported to the BSR.

When this process is completed in accordance with the written procedures of AHRI, AHRI may consider any comments received subsequent to the closing of the public review and comment period, or shall consider them at the next review.

Unresolved objections, along with attempts at resolution, and any substantive change made in a proposed American National Standard shall be reported in writing to the consensus body in order to afford all members an opportunity to respond, reaffirm, or change their vote within two weeks. Substantive changes made in a proposed American National Standard shall be listed in *Standards Action*.

5.9.6 Submittal of Standard.

Upon completion of the procedures for canvass, for disposition of views and objections, and for appeals, the proposed standard may be submitted to ANSI for

approval. The information to be supplied to ANSI shall be that specified in Section 4.2.1.1.h of the *ANSI Essential Requirements*.

5.9.7 Appeals.

Persons who have directly and materially affected interests, and who have been or will be adversely affected by a standard being canvassed or by the lack thereof, shall have the right to appeal any procedural actions or inactions of AHRI.

AHRI shall submit its written appeals mechanism to ANSI in applying for and continuance of its accreditation. AHRI has chosen to adopt the language in 5.5 in order to provide for the equitable processing of appeals.

AHRI shall provide or arrange for an impartial appeals body composed of three individuals knowledgeable as to the policy or other concerns related to the appeal. Such individuals must not have demonstrably real or apparent conflicts of interest with the subject of the appeal or the person filing the appeal.

The appeal must be filed in writing with AHRI. A summary of the nature of the appeal, and the decision and rationale thereof, shall be reported to the canvass list and ANSI.

The final AHRI decision on an appeal may be appealed within 90 calendar days to SCC's Chief Executive Officer.

5.9.8 Requests for Interpretation of Standards.

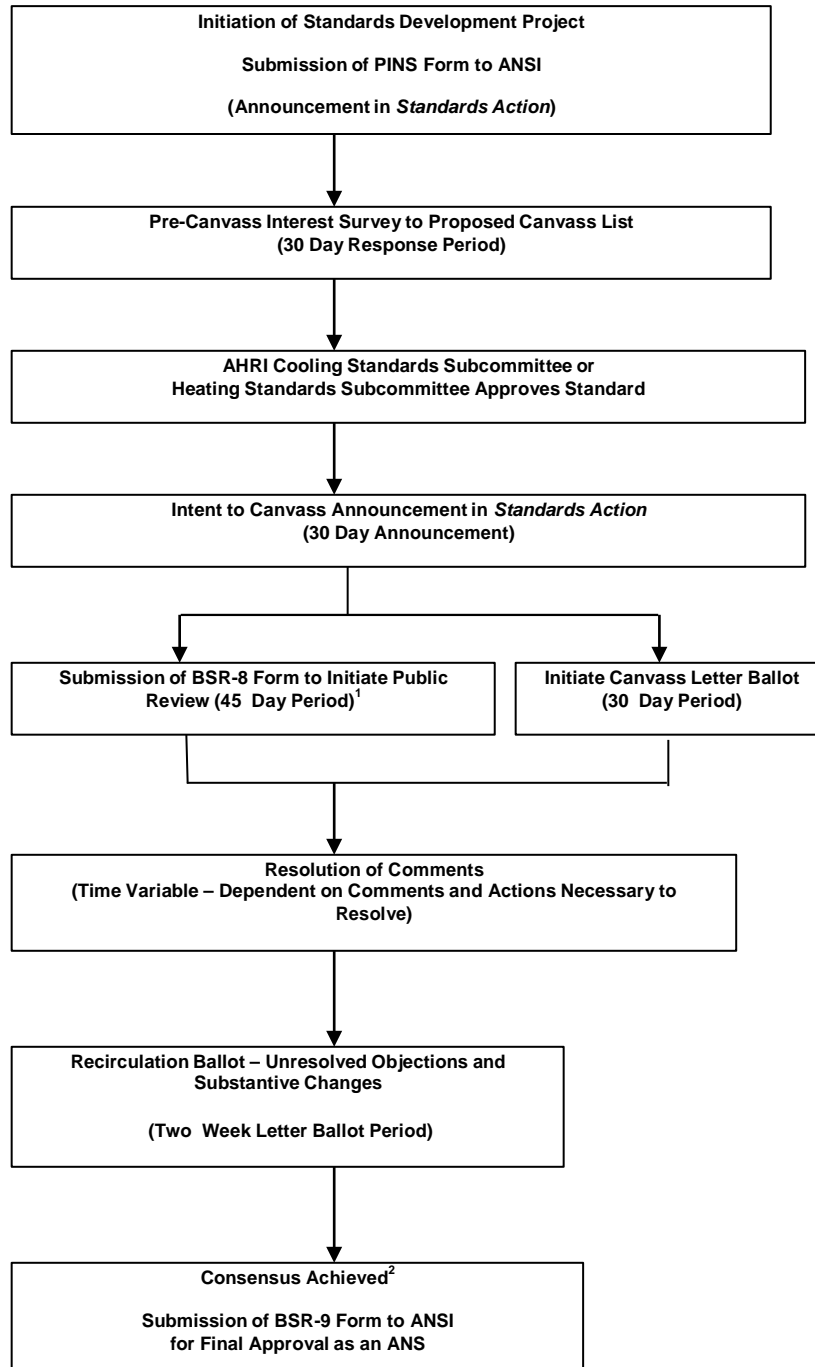
Written inquiries requesting interpretation of AHRI's approved American National Standards shall be responded to in accordance with the policy stipulated in 5.3. Revisions to the standard resulting from requests for interpretations shall be processed in accordance with these procedures.

5.9.9 Discontinuance of a Standards Project

AHRI may abandon the processing of a proposed new or revised American National Standard as provided for in Section 4.2.1.3.3 of the *ANSI Essential Requirements*.

Article 6. Format and Content of AHRI Standards

6.1 General. The general appearance, typography, outline form, numbering, and other physical features of a standard shall be in accordance with Appendix A of this document.



Notes: (1) For Canadian National Standards (CNS's), the public review shall be a minimum of sixty calendar days.

(2) For CNS's, there shall be at least one level of review and approval beyond the final approval by the technical committee.

Figure 4. Procedure for Approval of AHRI Standards as American National Standards (ANS's) and as Canadian National Standards (CNS's)

Appendix A to SPC Policy and Procedure

Format and Content Requirements for AHRI Standards



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APPENDIX A TO SPC POLICY AND PROCEDURE

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FORMAT AND CONTENT REQUIREMENTS FOR AHRI STANDARDS

Section 1. Purpose

1.1 *Purpose.* The purpose of this document is to establish a consistent format and content for standards published by AHRI.

Section 2. Scope

2.1 *Scope.* This document shall be used whenever a new standard is written or an existing standard is revised or modified. (See Section 7 for Application to Guidelines).

Section 3. Outline

3.1 *Outline.* The following outline shall be used to ensure consistency among the rating standards published by AHRI. In any given standard, some of the section headings listed may be omitted or additional headings may be inserted. Section headings used in a standard shall appear in the sequence shown:

- *Safety Disclaimer
- AHRI Certification Program Provisions
- *Supersedure Notice
- *Table of Contents
- *Purpose
- *Intent
- *Review and Amendment
- *Scope
- *Definitions
- Classifications
- Test Requirements
- Rating Requirements
- Minimum Data Requirements for Published Ratings
- Operating Requirements
- *Marking and Nameplate Data
- *Conformance Conditions
- Appendices
- *References - Normative
- References - Informative
- Methods of Testing

* Mandatory sections

Section 4. Specific Requirements for Each Section

(Underlined text in this appendix indicates standard **required** text that shall be included in each AHRI Standard without the underlining and written as shown).

4.1 *Safety Disclaimer.* The safety disclaimer shall be placed inside the front cover of each standard as shown in Figure 1. The **required** wording follows:

IMPORTANT

SAFETY DISCLAIMER

AHRI does not set safety standards and does not certify or guarantee the safety of any products, components or systems designed, tested, rated, installed or operated in accordance with this standard/guideline. It is strongly recommended that products be designed, constructed, assembled, installed and operated in accordance with nationally recognized safety standards and code requirements appropriate for products covered by this standard/guideline.

AHRI uses its best efforts to develop standards/guidelines employing state of the art and accepted industry practices. AHRI does not certify or guarantee that any tests conducted under its standards/guidelines will be non-hazardous or free from risk.

4.2 *AHRI Certification Program Provisions.* A statement shall be placed inside the front cover of each standard outlining the provisions of the AHRI Certification Program if such program has been developed. The statement shall describe the scope of the program and the certified ratings as shown in the example in Figure 1.

4.3 *Supersedure Notice.* A statement identifying the version of a standard being superseded shall be placed inside the front cover of standards as shown in Figure 1. The **required** wording for revised standards follows:

Note:

This standard supersedes AHRI Standard _____.

If a first generation standard is created, use the following **required** wording:

Note:

This is a new standard.

IMPORTANT

SAFETY DISCLAIMER

AHRI does not set safety standards and does not certify or guarantee the safety of any products, components or systems designed, tested, rated, installed or operated in accordance with this standard/guideline. It is strongly recommended that products be designed, constructed, assembled, installed and operated in accordance with nationally recognized safety standards and code requirements appropriate for products covered by this standard/guideline.

AHRI uses its best efforts to develop standards/guidelines employing state-of-the-art and accepted industry practices. AHRI does not certify or guarantee that any tests conducted under its standards/guidelines will be non-hazardous or free from risk.

AHRI CERTIFICATION PROGRAM PROVISIONS

Scope of the Certification Program

The Certification Program includes all air-cooled, water-cooled and evaporatively cooled unitary air-conditioning, air-source unitary heat pump equipment, and air-conditioning condensing units rated at or above 65,000 Btu/h at AHRI Standard Rating Conditions (Cooling) but below 250,000 Btu/h at AHRI Standard Rating Conditions (Cooling).

Certified Ratings

The following Certification Program ratings are verified by test:

Unitary Air-Conditioners and Air-Conditioning Condensing Units (see Section 5)

Air-cooled, water-cooled and evaporatively cooled from 65,000 Btu/h to below 250,000 Btu/h.

1. AHRI Standard Rating Cooling Capacity, Btu/h
2. Energy Efficiency Ratio, EER, Btu/W·h
3. Integrated Energy Efficiency Ratio, (IEER)

Air-Source Unitary Heat Pump Equipment (see Section 5)

Air-cooled from 65,000 Btu/h to below 250,000 Btu/h.

1. AHRI Standard Rating Cooling Capacity, Btu/h
2. Energy Efficiency Ratio, EER, Btu/W·h
3. High Temperature Heating Standard Rating Capacity, Btu/h
4. High Temperature Coefficient of Performance (COP 47°F)
5. Low Temperature Heating Standard Rating Capacity, Btu/h
6. Low Temperature Coefficient of Performance (COP 17°F)
7. Integrated Energy Efficiency Ratio, (IEER)

Conformance to the requirements of the Maximum Operating Condition Test, Voltage Tolerance Test, Low-Temperature Operation Test (Cooling), Insulation Efficiency Test (Cooling), and Condensate Disposal Test (Cooling), (see Section 6) are also verified by test.

Note:

This standard supersedes AHRI Standard 340/360-2007 and is subject to review and amendment as technology advances.

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Figure 1. Sample Format and Contents of Inside of Front Cover of an I-P Standard

4.4 *Table of Contents.* Each standard shall have a Table of Contents preceding the main body of the standard. It shall list the title and page for each major section within the standard. Tables and Figures within the standard shall be identified in separate listings (similar to that shown in the Table of Contents of this Appendix). A listing of Appendices and related Tables shall follow.

4.5 *Purpose.* Each standard shall have the purpose clearly defined. The **required** wording follows.

1.1 Purpose. The purpose of this standard is to establish for (products): definitions; classifications; test requirements; rating requirements; minimum data requirements for Published Ratings; operating requirements; marking and nameplate data; and conformance conditions.*

1.1.1 Intent. This standard is intended for the guidance of the industry, including manufacturers, engineers, installers, contractors and users.

1.1.2 Review and Amendment. This standard is subject to review and amendment as technology advances.

* Delete those sections not included in the standard - the items listed should be identical to the sections appearing in the standard.

4.6 *Scope.* This section should identify unique characteristics of the product/process necessary to define what is included within the standard. This could include specifics regarding application, arrangement, components, capacities, etc. The following statement may suffice:

2.1 *Scope.* This standard applies to (products) as defined in Section 3.

To help clarify the scope, it may be desirable to mention specific standards, equipment configurations, capacity ranges, etc., which are similar to but not included as part of this standard. The following statement may be adequate:

2.2 *Exclusions.* This standard does not apply to _____.

4.7 *Definitions.* To the extent practicable, the current edition of *ASHRAE Wikipedia* shall be used for defining all terms used in AHRI standards. If terms do not appear in that document, an appropriate definition shall be included in the AHRI standard. Definitions shall be arranged in alphabetical order and only those germane to the standard shall be included. If a defined term is to be used within the text of the standard as a noun, the first letter of each major word shall be capitalized. If an acronym is to be used in the standard, it shall be included in parentheses after the initial use of the defined term, e.g., Coefficient of Performance (COP). Acronym usage thereafter shall be restricted to the acronym and not have the defined term repeated.

The **required** wording for the first paragraph in this section shall be:

All terms in this document will follow the standard industry definitions in the ASHRAE Wikipedia website: <http://wiki.ashrae.org/index.php/ASHRAEwiki> unless otherwise defined in this section.

The definitions for "Published Rating" and "Shall" or "Should" shall be included in this section if they are used in the standard. In addition, the headings of a particular definition should not be repeated at the beginning of that subsection (as illustrated below).

The **required** wording for those definitions, as well as for other terms that may be common to many standards, is illustrated in the following examples:

3.1 *Bubble Point.* Refrigerant liquid saturation temperature at a specified pressure.

3.2 *Coefficient of Performance (COP).* A ratio of the Cooling/Heating Capacity in watts to the power input values in watts at any given set of Rating Conditions expressed in watts/watt. For heating COP, supplementary resistance heat shall be excluded.

APPENDIX A TO SPC POLICY AND PROCEDURE

3.2.1 Standard Coefficient of Performance. A ratio of the capacity to power input value obtained at Standard Rating Conditions.

3.3 Cooling Capacity. The capacity associated with the change in air enthalpy which includes both the Latent and Sensible Capacities expressed in watts.

3.3.1 Latent Capacity. Capacity associated with a change in humidity ratio.

3.3.2 Sensible Capacity. Capacity associated with a change in dry-bulb temperature.

3.4 Dew Point. Refrigerant vapor saturation temperature at a specified pressure.

3.5 Energy Efficiency Ratio (EER). A ratio of the Cooling Capacity in Btu/h to the power input value in watts at any given set of Rating Conditions expressed in Btu/(W·h).

3.5.1 Standard Energy Efficiency Ratio. A ratio of the capacity to power input value obtained at Standard Rating Conditions.

3.6 Heating Capacity. The capacity associated with the change in dry-bulb temperature expressed in watts.

3.7 Integrated Part-Load Value (IPLV). A single number part-load efficiency figure of merit calculated per the method described in this standard.

3.8 Published Rating. A statement of the assigned values of those performance characteristics, under stated Rating Conditions, by which a unit may be chosen to fit its application. These values apply to all units of like nominal size and type (identification) produced by the same manufacturer. The term Published Rating includes the rating of all performance characteristics shown on the unit or published in specifications, advertising or other literature controlled by the manufacturer, at stated Rating Conditions.

3.8.1 Application Rating. A rating based on tests performed at application Rating Conditions (other than Standard Rating Conditions).

3.8.2 Standard Rating. A rating based on tests performed at Standard Rating Conditions.

3.9 Rating Conditions. Any set of operating conditions under which a single level of performance results and which causes only that level of performance to occur.

3.9.1 Standard Rating Conditions. Rating Conditions used as the basis of comparison for performance characteristics.

3.10 "Shall" or "Should". "Shall" or "should" shall be interpreted as follows:

3.10.1 Shall. Where "shall" or "shall not" is used for a provision specified, that provision is mandatory if compliance with the standard is claimed.

3.10.2 Should. "Should" is used to indicate provisions which are not mandatory but which are desirable as good practice.

3.11 Standard Air. Air weighing 1.2 kg/m^3 which approximates dry air at 21°C and at a barometric pressure of 101.3 kPa for an SI standard. For an I-P standard, use 0.075 lb/ft^3 , 70°F , and 29.92 in Hg.

4.8 Classifications. It may be desirable to separate a product line into distinct classifications to help identify unique characteristics or applications. Such classifications could be by unit size, physical orientation, capacity, operating characteristics, method of heating or cooling or any other designation that would clarify its intended usage and prescribed performance.

Various classifications may require different testing/rating conditions which may need to be segregated in a Certification Program and/or when comparisons are being made.

Following is an example of classifications for water-source heat pumps.

Table 1. Example of Classification of Water-Source Heat Pumps			
Types of Water-Source Heat Pumps			
Designation	AHRI Type	* Arrangement	
Single Package (Ducted)	HSP-W	FAN	COMP
		EVAP	COND
		FAN	COND
		EVAP	COMP
Single Package (Free Delivery)	HSP-W-O		
Split System (Ducted)	HRCU-W	FAN	COMP
		EVAP	COND
Split System (Free Delivery)	HRCU-W-O	FAN	COND
		EVAP	COMP
*Denotes cooling mode function			

4.9 Test Requirements. This section identifies all procedures and conditions necessary for testing the product. (In some instances to avoid redundancy, it may be desirable to combine this section with the *Rating Requirements* section). The appropriate test standard should be referenced, or if a standard does not exist, one should be developed and included in the appendices. If testing must be done at conditions not specified within the test standard, they shall be included in this section.

4.10 Rating Requirements. This section shall define the standard rating conditions, identify the rating data to be published (i.e., capacity, EER, air flow, IPLV, sound, etc.) and establish the verification testing uncertainties which apply to the rating data.

Test result deviations from Published Ratings shall not exceed 5% on capacity, power input and performance ratio and 10% on fluid side pressure drop. Requests for exception to these maximums accompanied by strong supporting justification must be submitted to the Standards Policy Committee for approval. Suggested wording for verification testing uncertainties follows:

Verification Testing Uncertainties. To comply with this standard, measured test results shall not be less than 95% of Published Rating for performance ratios and capacity; shall not exceed 105% of Published Ratings for power; and shall not exceed 110% of Published Ratings for pressure drop.

In addition, this section should discuss all other aspects of rating data for the equipment covered by the standard. This should include defining part-load rating conditions and/or Application Ratings and their usage. If the values of the rating data must be expressed in specific units or certain increments, these should also be specified in this section.

4.11 Minimum Data Requirements for Published Ratings. The minimum data requirements for Published Ratings shall include those performance characteristics, at Standard Rating Conditions, by which a product may be chosen to fit its application. When a Certification Program is in place, published data shall include all performance characteristics included in the program. Other data may be required at the option of the AHRI Section or its Engineering Committee.

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At minimum, the following **required** wording shall be included in the standard:

Minimum Data Requirements for Published Ratings. As a minimum, Published Ratings shall include all Standard Ratings. All claims to ratings within the scope of this standard shall include the statement “Rated in accordance with AHRI Standard xxx”. All claims to ratings outside the scope of this standard shall include the statement “Outside the scope of AHRI Standard xxx”. Wherever Application Ratings are published or printed, they shall include a statement of the conditions at which the ratings apply.

4.12 *Operating Requirements.* When production units are required to meet minimum operating requirements, they shall be identified in this section. Examples of such operating requirements follow.

- Maximum Operating Conditions
 - Ambient Air Temperature
 - Condenser Entering Water Temperature
 - Indoor Air Temperature
 - Water Flow Rates
- Minimum Operating Conditions
 - Ambient Air Temperature
 - Condenser Entering Water Temperature
 - Indoor Air Temperature
 - Water Flow Rates
- Voltage (Minimum and Maximum)
- Insulation Efficiency
- Condensate Disposal
- Air Infiltration

4.13 *Marking and Nameplate Data.* This section shall require that the nameplate, as a minimum, display the model number and the name of the manufacturer or supplier responsible for the performance rating. Additionally, where applicable, it shall also require electrical characteristics to be displayed.

In such cases, the following **required** wording shall be included in the standard.

Nameplate voltages for 60 Hertz systems shall include one or more of the equipment nameplate voltage ratings shown in Table 1 of AHRI Standard 110. Nameplate voltages for 50 Hertz systems shall include one or more of the utilization voltages shown in Table 1 of IEC Standard 60038.

Note: Referencing of AHRI Standard 110 for 50 Hertz systems is also acceptable.

Other markings may be included in this section as deemed necessary by the AHRI Section or its Engineering Committee.

4.14 *Conformance Conditions.* The **required** wording follows.

Conformance. While conformance with this standard is voluntary, conformance shall not be claimed or implied for products or equipment within the standard’s *Purpose* (Section 1) and *Scope* (Section 2) unless such product claims meet all of the requirements of the standard and all of the testing and rating requirements are measured and reported in complete compliance with the standard. Any product that has not met all the requirements of the standard shall not reference, state, or acknowledge the standard in any written, oral, or electronic communication.

4.15 *Appendices.* Where appropriate, each standard may contain one or more appendices. Each appendix shall be identified alphabetically rather than numerically. The preferred order for the appendices, brief description of each, and the **required** wording, follows:

APPENDIX A. REFERENCES – NORMATIVE

A1 Listed here are all standards, handbooks and other publications essential to the formation and implementation of the standard. All references in this appendix are considered as part of the standard. A reference must be identified within the standard or normative appendices if it is to be included in Appendix A.

APPENDIX B. REFERENCES – INFORMATIVE

B1 Listed here are standards, handbooks and other publications which may provide useful information and background but are not considered essential. References in this appendix are not considered part of the standard. If there are no informative references show “None”.

APPENDIX C. METHODS OF TESTING FOR RATING (--- equipment---) –NORMATIVE

If no appropriate test standard exists or if ASHRAE is unable to prepare one in a timely manner, one should be developed by the Engineering Committee and be included in this appendix. It should contain all information normally included in an ASHRAE standard.

APPENDIX D. E. etc.

If additional appendices are required, they shall appear in the order of relative importance.

Examples of References

References shall be listed alphabetically and shall include the location of the organizations cited. References to other standards and/or guidelines shall include the specific date or edition of the document. The format for references shall be per the following examples:

AHRI Standard 110-2002, *Air-Conditioning and Refrigerating Equipment Nameplate Voltages*, 2002, Air-Conditioning, Heating and Refrigeration Institute, 2111 Wilson Blvd., Suite 500, Arlington, VA 22203, U.S.A.

ASHRAE Handbook of Refrigeration, Chapter 49, *Codes and Standards*, 2006, American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., 1791 Tullie Circle, N.E., Atlanta, GA 30329, U.S.A.

Palmatier, E.P. *Construction of the Normal Temperature ASHRAE Psychrometric Chart*, *ASHRAE Journal*, Vol. 5, 2001, pp 55, American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., 1791 Tullie Circle, N.E., Atlanta, GA 30329, U.S.A.

Section 5. Units of Measure

5.1 *Units of Measure.* The brief listing in Table 2 provides the correct identification and proper units for some commonly used characteristics.

All AHRI standards and guidelines shall be written in “hard” rational units. Standards and guidelines shall either: (1) be converted to “hard” rational SI units or (2) dual standards shall be written, one in “hard” rational SI units and one in “hard” rational I-P units. The Standards Policy Committee (SPC) can grant exemptions from this policy.

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Table 2. Examples of Commonly Used Units			
Characteristic	I-P Description	Designation	
		I-P	SI
Cooling or Heating Capacity	Btu per hour	Btu/h	W
Flow Rate	cubic feet per minute	cfm, ft ³ /min	m ³ /s
	gallons per minute	gpm	L/s
Heat Transfer Coefficient	Btu per hour·square foot ·degree Fahrenheit	Btu/ h·ft ² ·°F	W/ m ² ·°C
Length	feet	ft	mm, m
	inches	in	mm
Percentage	percent	%	%
Power	watts	W	kW
Pressure	pounds per square inch	psi, lb/in ²	kPa
	inches of mercury	in Hg	kPa
	inches of water	in H ₂ O	kPa, Pa
Rotational Speed	revolutions per minute	rpm	rev/s
Temperature	thermodynamic	°F	°C
	difference	°F	°C
Time	seconds	s	s
	minutes	min	min
	hours	h	h
Velocity	feet per second	fps, ft/s	m/s
	feet per minute	fpm, ft/min	m/s
Weight	pounds	lb	kg

5.2 Significant Figures.

The same amount of significant figures used in the I-P units shall be used in the SI units.

Section 6. Equation Format

6.1 *Equation Format.* Equations listed in AHRI Standards shall only consist of symbols. If the equation includes a constant, then both I-P and SI values shall be listed under the equation with the units.

For a simple set of 1 or 2 equations, it is required that each symbol used in the preceding equation be listed alphabetically and clearly identified directly under each equation, including both I-P and SI units, starting with “where...”. Symbols with subscripts should also be defined following each equation.

For a complex set of more than 2 equations, all symbols used within each equation should be alphabetized and defined in a subsequent separate section, and should include I-P and SI units. In addition, any subscripts used in the equations should also be included separately within this section.

Effective 1 January 2009, dual standards may be issued where the equations will be in only one unit of measure, IP or SI.

To indicate multiplication of consecutive terms in an equation, the terms should be separated by a dot “•” to represent the multiplication symbol. (Exception: a dot “•” is not required when parentheses are used).

Section 7. Application to Guidelines

7.1 *AHRI Guidelines.* The general provisions of this appendix are applicable to Guidelines with the exception of the use of mandatory language and the statement on voluntary conformance.

7.1.1 Mandatory Language (4.7 and 3.10.1) shall not be used in a guideline. Where a guideline makes reference to mandatory government regulations, reference to such regulations shall contain a prefix phrase "Federal (State, Local, etc. as appropriate) law requires that ...," followed by the appropriate text.

7.1.2 Guidelines shall not contain any text related to voluntary conformance (4.14).

Section 8. AHRI Standards & Guidelines Checklist

Table 3 shows a summarized AHRI Standards & Guidelines Checklist which shall be used by AHRI Executive Assistants and staff in conjunction with this Appendix to verify the information and content in a standard/guideline. Standards to be submitted for review by the Cooling Standards Subcommittee (CSS) or the Heating Standards Subcommittee (HSS) shall be accompanied by a completed checklist.

1. AHRI Standard/Guideline Under Review: _____
2. CSS/HSS Review Date: _____
3. Engineering Committee: _____
4. Responsible Engineering Committee Chairperson (Print Name): _____
5. Responsible AHRI Staff Person(s) (Print Name): _____

Section/Subsection	TOTAL # OF VOTES	FOR	AGAINST	ABSTAIN
Engineering Committee	TOTAL # OF VOTES	FOR	AGAINST	ABSTAIN

Table 3. AHRI Standards & Guidelines Checklist

Section	Primary Responsibility		Items Requiring Verification [Does the Document...?]	Check (✓) and Initial
	Engineering Committee	AHRI Staff		
1. Cover Page: <ul style="list-style-type: none"> • Date • Safety Disclaimer • Supersedure • Copyright Date 		✓ ✓ ✓ ✓	<ul style="list-style-type: none"> • Use the Publication Date • Insert Correct Paragraph • Refer to Current Standard • Use Current Year 	
2. Table of Contents <ul style="list-style-type: none"> • Section Titles and Pages 	✓	✓	<ul style="list-style-type: none"> • Use Correct Section Headings & Page Numbers • Use Proper Sequence 	
3. Purpose and Scope	✓		<ul style="list-style-type: none"> • Use Required Wording as Recommended 	
4. Definitions	✓		<ul style="list-style-type: none"> • Use ASHRAE Wikipedia, if Applicable • Use Standard Definitions • List Terms Only Used Within the Standard • Avoid Repeating Heading Within Definition • List Definitions in Alphabetical Order • Include “Shall” and “Should” Definitions 	

Table 3 (Continued). AHRI Standards & Guidelines Checklist

Section	Primary Responsibility		Items Requiring Verification [Does the Document...?]	Check (✓) and Initial
	Engineering Committee	AHRI Staff		
5. General Text	✓		<ul style="list-style-type: none"> • Provide Reference to Pertinent Test Standards • Include only Title of Referred Standard (use Standard Number) • Use Proper Format and Designation for Units of Measure • Use Required Wording in Accordance with Appendix A to SPC Policy and Procedures • For policy on units of measure, see page 44, Section 5. • Maintain Compliance with Mandatory Sections in Appendix A to SPC Policy and Procedures 	
6. Proper Equation Format	✓		<ul style="list-style-type: none"> • Only Use Symbols in Equations • For Few Equations, List Equations Followed by Definition(s) of Symbols used, including symbols with subscripts • For Numerous Equations, Alphabetically List All Symbols and Subscripts Used in a Separate Section Following the Listed Equations. • For policy on units of measure, see page 44, Section 5. • Include Constants Described in the Definition of Terms • For policy on units of measure, see page 44, Section 5. 	
7. Tables and Figures	✓		<ul style="list-style-type: none"> • Include a Reference in the Text • Match Wording in Text • Use a Readable Font • Use Properly Defined Headings • For policy on units of measure, see page 44, Section 5. • Keep a Consistent Order as it Appears in the Text 	
8. Significant Figures			<ul style="list-style-type: none"> • Use Equivalent Significant Figures for I-P and SI Units Values 	

Table 3 (Continued). AHRI Standards & Guidelines Checklist				
Section	Primary Responsibility		Items Requiring Verification [Does the Document...?]	Check (✓) and Initial
	Engineering Committee	AHRI Staff		
9. Appendices A and B	✓	✓	<ul style="list-style-type: none"> • Maintain Alphabetical Order • In Normative References, Include only References Mentioned and Required in the Text • In Informative References, Include References Not Mentioned in the Text • Include Reference Titles and Dates • Use the Latest Edition/Revision of Reference Standards 	
10. Appendix C (Test Procedures)	✓		<ul style="list-style-type: none"> • Follow ASHRAE Format • Maintain Compliance with Items Listed in Sections on : <ul style="list-style-type: none"> - General Text - Proper Equation Format - Tables and Figures - Significant Figures • Use the Latest Edition/Revision of Reference Standards 	
11. AHRI Guidelines <ul style="list-style-type: none"> • General Text 	✓		<ul style="list-style-type: none"> • Use "Should" and "Recommended" correctly • Avoid the Use of "Shall" • Avoid the Use of "Voluntary Conformance" • Avoid Using Normative References • Avoid Using Mandatory Language 	

APPENDIX A TO SPC POLICY AND PROCEDURE

Section 9. AHRI Additions for ISO Standards

9.1 For ISO Standards that are to be adopted as AHRI Standards, Figure 2 illustrates the sample format and contents of the title page of an AHRI-Adopted ISO standard. Figure 3 illustrates the sample format and contents of the page following the title page.

For the title page and the page following the title page, specific AHRI additions to ISO Standards that are necessary prior to its adoption as an AHRI Standard are outlined as follows.

9.1.1 *Safety Disclaimer.* The safety disclaimer statement shall be placed on the page following the title page of each standard, as shown in Figure 3.

The **required** wording is shown in 4.1.

9.1.2 *AHRI Certification Program Provisions.* A statement shall be placed on the page following the title page of each standard outlining the provisions of the AHRI Certification Program if such program has been developed. The statement shall describe the scope of the program and the certified ratings. For an example, see Figure 3.

9.1.3 *Supersedure Notice.* A statement identifying the version of a standard being superseded shall be placed on the page following the title page of standards. For an example, see Figure 3. The **required** wording for revised standards follows:

Note:

This standard supersedes _____.

If a first generation standard is created, use the following **required** wording:

Note:

This is a new standard.

9.2 It is intended that the information shown below will be printed on the page following the title page or on subsequent pages after the title page of the standard.

9.2.1 *Intent.* Each standard shall have the intent clearly defined. The **required** wording is shown in 4.5, 1.1.1

9.2.2 *Classification.* It may be desirable to separate a product line into distinct classifications to help identify unique characteristics or applications. Such classifications could be by unit size, physical orientation, capacity, operating characteristics, method of heating or cooling or any other designation that would clarify its intended usage and prescribed performance.

Various classifications may require different testing/rating conditions which may need to be segregated in a Certification Program and/or when comparisons are being made. For an example, see Table 1.

9.2.3 *Marking and Nameplate Data.* In addition to the information required in the Marking Provisions section of the ISO Standard, add the required wording shown in 4.13, if applicable.

9.2.4 *Voluntary Conformance.* The **required** wording is shown in 4.14.

9.2.5 *Consistency.* If any of the following sections listed are not included in an ISO Standard, the appropriate AHRI Engineering Committee shall evaluate the need to include such information to ensure consistency.

- Table of Contents
- Scope
- Definitions
- Test Requirements
- Rating Requirements
- Minimum Data Requirements
for Published Ratings
- Operating Requirements
- Marking and Nameplate Data
- Appendices



ANSI/ISO/AHRI/ASHRAE Standard XXXX

ANSI Approval Date: XX Month XXXX

2008 Standard for Title of Standard



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FX 703.562.1942

Figure 2. Sample Format and Contents of the Title Page of an AHRI-Adopted ISO Standard

IMPORTANT

SAFETY DISCLAIMER

AHRI does not set safety standards and does not certify or guarantee the safety of any products, components or systems designed, tested, rated, installed or operated in accordance with this standard/guideline. It is strongly recommended that products be designed, constructed, assembled, installed and operated in accordance with nationally recognized safety standards and code requirements appropriate for products covered by this standard/guideline.

AHRI uses its best efforts to develop standards/guidelines employing state-of-the-art and accepted industry practices. AHRI does not certify or guarantee that any tests conducted under its standards/guidelines will be non-hazardous or free from risk.

**AHRI CERTIFICATION PROGRAM
PROVISIONS
Scope of the Certification Program**

The certification program includes air-to-air heat exchangers for use in Energy Recovery Ventilation Equipment

This certification program does not include heat exchangers joined by circulated heat transfer medium (runaround loop).

Certified Ratings

The following certification program ratings are verified by test:

1. Airflow, m³/s
2. Pressure Drop, in Pa
3. Sensible and Net Sensible Effectiveness (at 100% and 75% Rated Airflow for heating and cooling conditions)
4. Latent and Net Latent Effectiveness (at 100% and 75% Rated Airflow for heating and cooling conditions)
5. Total and Net Total Effectiveness (at 100% and 75% Rated Airflow for heating and cooling conditions)
6. Exhaust Air Transfer Ratio, Outdoor Air Correction Factor, and Purge Angle or Setting (if applicable) at 0.0 Pa and two or more pressure differentials
7. Tilt Angle, °, (at heating and cooling conditions, if applicable)

Note:

This standard supersedes AHRI Standard _____.

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Figure 3. Sample Format and Contents of the Page Following the Title Page of an AHRI-Adopted ISO Standard

Appendix B: ANSI Patent Policy - Inclusion of Patents in American National Standards (ANS)

[Adopted from the ANSI Patent Policy - Inclusion of Patents in American National Standards (ANS)]

There is no objection in principle to drafting an American National Standard (ANS) in terms that include the use of an essential patent claim (one whose use would be required for compliance with that standard) if it is considered that technical reasons justify this approach.

If AHRI receives a notice that a proposed ANS or an approved ANS may require the use of such a patent claim, the procedures in this clause shall be followed.

B.1 Statement from Patent Holder

AHRI shall receive from the patent holder or a party authorized to make assurances on its behalf, in written or electronic form, either:

- a) assurance in the form of a general disclaimer to the effect that such party does not hold and does not currently intend holding any essential patent claim(s); or
- b) assurance that a license to such essential patent claim(s) will be made available to applicants desiring to utilize the license for the purpose of implementing the standard either:
 - i) under reasonable terms and conditions that are demonstrably free of any unfair discrimination; or
 - ii) without compensation and under reasonable terms and conditions that are demonstrably free of any unfair discrimination.

B.2 Record of Statement

A record of the patent holder's statement shall be retained in the files of both AHRI and ANSI.

B.3 Notice

When AHRI receives from a patent holder the assurance set forth in B.1.b above, the standard shall include a note substantially as follows:

NOTE – The user's attention is called to the possibility that compliance with this standard may require use of an invention covered by patent rights.

By publication of this standard, no position is taken with respect to the validity of any such claim(s) or of any patent rights in connection therewith. If a patent holder has filed a statement of willingness to grant a license under these rights on reasonable and nondiscriminatory terms and conditions to applicants desiring to obtain such a license, then details may be obtained from the standards developer.

B.4 Responsibility for Identifying Patents

Neither AHRI nor ANSI is responsible for identifying patents for which a license may be required by an American National Standard or for conducting inquiries into the legal validity or scope of those patents that are brought to their attention.