



AUSTRALIAN INSTITUTE OF REFRIGERATION,
AIR CONDITIONING AND HEATING

Technical Paper Guidelines

2020

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AIRAH Technical Paper Guidelines

This paper provides guidelines on writing a technical submission for inclusion in Ecolibrium or presentation at an AIRAH conference. Adherence to these guidelines will assist the review process and increase the chances of your paper being included.

1. Content

The chief purpose of any technical paper is to convey information to others, many of whom will be far less familiar with the general subject than the author. Care should be exercised, therefore, to ensure that simple terms and expressions are used and that statements are made as concise as possible. If highly technical or uncommon terms are used, they should be adequately explained and defined. The author should attempt to write for the average reader, not the specialist.

Use of first person and reference to individuals should be made in such a manner as to avoid personal bias.

The paper is required to be non-commercial and explain a process rather than an individual piece of equipment or machinery. Good-quality practical information describing new techniques and processes or the innovative use of old ones are sought. The inclusion of trade names, logos, university sponsors, consulting firms, vendors, contracting agencies or identification of other commercial interests in the text or its illustrations is not permitted. Company names should only be mentioned in acknowledgements, references and the "About the Author" section. The author's position and affiliation or sponsoring agency will be accepted in "About the Author".

Necessary reference to the parties involved will be accepted as part of a case study or feature article, however, these references should not be overtly commercial in nature. A case study is intended to focus on a particular project undertaken or participated in by the author and give a general overview of the project rather than a high-level technical description of the specific components and processes involved.

2. International system (SI) of units

Authors must use SI units in papers. It is recommended that the SI units be quoted to those recommended by the appropriate international body.

Common errors made in technical papers include:

- For power the unit is kW, not KW or Kw
- For pressure the unit is kPa, not KPA, KPa or Kpa
- For absolute temperature the unit is K, not °K or k
- For kilowatt hours, the unit is kWh, not kW/hr
- For volumetric airflow rates the unit is L/s not l/s

3. Length

Each paper should be limited to 3,000 words. Subject to discussions with the author, any paper submitted above this amount may be edited for reasons of space and clarity. A series of two papers will be considered for topics that cannot be adequately improved.

4. Structure of the paper

The paper should consist of the following sections:

Title	The title of the paper should be explicit, descriptive and as brief as possible. Long titles are to be avoided.
Authors and affiliations	The name of the author(s) should appear immediately below the title at the top of the first page, together with the author(s) qualifications and post-nominals.
About the author	A 100-word biography is encouraged, which includes information on qualifications, work experience and current employment. Authors are also invited to submit a photo with their biography, see Section 5 below for guidelines on the submission of photographs.
Abstract	The main text should be preceded by an abstract of approximately 150 words, which should be self-contained and be as explicit as possible, setting out the topic being covered and the principal conclusions reached.
Introduction	The main purpose of an introduction is to enable the paper to be easily understood without undue reference to other sources. It should therefore have sufficient background material for this purpose.
Main body	<p>The author's purpose or aim should be stated at the beginning so that the reader will have a clear conception of the objective. This should be followed by a description of the problem (or scenario), the means of solution and other information necessary to properly qualify the results presented and the conclusions drawn.</p> <p>It is important to present information in a logical sequence.</p> <p>Headings used within the main body of the paper should be consecutively numbered, as per the following example:</p> <p>5. <i>Major heading</i></p> <p>5.1 <i>Major sub-heading</i></p> <p>5.1.1 <i>Minor sub-heading</i></p>

Conclusions	This section is very important, because some readers may only refer to the conclusion and abstract. It should list conclusions, numerically where possible, and summarise the significance of the paper as clearly and concisely as possible.
Acknowledgments	Should an author wish to acknowledge assistance received from sources other than those included as references or bibliographies, this should be done in a final paragraph following the conclusions. Examples of acknowledgements would include colleagues and organisations.
Nomenclature	A special section may be needed if the paper contains extensive equations or unusual terminology. If not, nomenclature may follow each equation. The author should use standard symbols and notations as outlined in AS2900-1986 Quantities, Units and Symbols.
References and/or bibliography	<p>A list of references and/or a bibliography citing any external resources used must be included.</p> <p>A reference list is composed only of works cited in the text, and a bibliography is a general reading list – the two must not be combined.</p> <p>Accuracy is essential in both cases. Check all references against the source, and make sure that the authors' names are spelled correctly, that the title is written as it appears in print and that the correct volume, issue, publisher and page numbers and dates are listed.</p> <p>References should be listed in alphabetical order, consecutively numbered. Bibliography entries should be listed alphabetically. The following forms are preferred:</p> <p>a) Books and handbooks</p> <p>7. Stoecker, W.F. and Jones, J.W.; Refrigeration and Air Conditioning, 2nd ed., McGraw-Hill Book Company, (1982)</p> <p>8. ASHRAE: ASHRAE Handbook – 1981 Fundamentals, American Society of Heating, Refrigeration and Air-conditioning Engineers Inc., pp.11.1-11.7, (1981)</p> <p>b) Journal articles</p> <p>4. Charters, W.W.S. and Sadafi, H.A.; “Saturation Property Equations for R22”, International Journal of Refrigeration, Vol.10, No.2, pp.103-104 (1987)</p> <p>c) Standards</p> <p>1. Australian Standard: AS1668, Part 2 – 1980, “SAAS Mechanical Ventilation and Air Conditioning Code, Part 2 – Ventilation Requirements”, Standards Association of Australia, p.27, (1980)</p>

The form of citing in the paper should be by giving the author’s name followed by the reference number enclosed in square brackets, or by only the reference numbers enclosed in square brackets.

Examples:

- Air velocities to avoid stuffiness, obtained by Fanger and Christensen [3], are ...
- ... is derived in many standard texts [7,8]

Other standard methods of referencing (e.g., the Harvard system) will be accepted provided that their use is consistent throughout the submission.

Appendices

In a highly mathematical paper, it may often be advisable to develop equations and formulae in an appendix rather than in the body of the paper. This will reduce the distraction of the reader’s attention while reading the paper.

Appendices may also be used for details, description of apparatus and other related material not essential to the general presentation of the subject.

5. Format

Completed papers will be formatted as part of the graphic design process. The author is not responsible for the final formatting, only for amendments that arise from the review process.

For uniformity in printing, authors are required to make submissions in the structure detailed in Section 4 of this document.

Submissions are to be provided in electronic format using Microsoft Word.

Equations

Equations are required to be numbered consecutively. Wherever possible, mathematical equations should be word processed, e.g.:

$$W = W_{WB} - B(t - t_{WB}) \tag{1}$$

where:

$$B = \frac{c_p Le^{2/3}}{h_{fg}} \left[1 + \left(\frac{h_r}{h_c} \right) \frac{(t_{\infty} - t_{WB})}{(t - t_{WB})} \right] \tag{2}$$

Reference to equations in the text should be as follows: “Using equations (1) and (2), the moisture content can be...”

Tables

The table references and caption should appear below the table. Tables are to be numbered consecutively with the word “Table”, followed by the appropriate number and title.

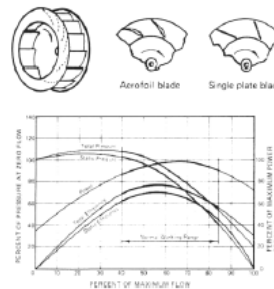
June	\$12,000
July	\$12,500
August	\$11,000

Table 2. Comparison of running costs

Reference to tables in the text should be made with the word “Table” followed by the appropriate number, as follows: “...as shown in Table 2...”

Figures

The figure reference and captions are to appear below the figure. The figures are to be numbered consecutively, with the word “Figure” followed by the appropriate number and title.



Reference to figures in the text should be made using the word “Figure” followed by the appropriate number, as follows: “...as shown in Figure 1...”

Figures should be positioned in the paper as near as possible to where the figure is first referenced.

Photographs

If possible, photographs should not be included unless they are saved in .tif or .jpg format of at least 300 DPI. If it is necessary to include photographs and it is impossible to supply them in electronic format, they can be supplied in printed format. They must be clear and sharp with a glossy finish. They should be provided loose with appropriate identification to allow insertion into the correct location. Photographs should be mailed flat between cardboard; they should not be rolled or folded. Do not write on the back of the photograph.

6. Submissions

Conferences

conferences@airah.org.au

Ecolibrium

matt.dillon@airah.org.au

7. Author's expenses

Subscriptions paid to the Institute by its members does not provide sufficient funds to pay expenses incurred by authors in connection with the preparation of technical papers and attendance at meetings to present them, or remuneration to authors for any publishing by the Institute.

8. Institute responsibility

AIRAH shall not be responsible for any statement or opinion given in any article, paper or discussion published by it, or expressed at a meeting of the Institute.

9. Ownership of papers and copyright

Ecolibrium shall have exclusive publishing rights of any technical papers submitted to the Institute.

The AIRAH office will advise authors if their papers have been accepted for publication. If accepted for publication, reprint permission would not be unreasonably withheld after the paper had first appeared in Ecolibrium.

An author who has had a paper accepted is not free to offer it to another for publication, without the consent of the Institute.

Where the author has previously submitted papers to another institute or society, the author shall provide this Institute with a copy of the clearance from the first institute or society.