Miscellaneous Publication

Modelling of space heating and cooling and ventilation systems, using TRNSYS



SA MP 103:2019

This Australian Miscellaneous Publication was prepared by CS-028, Solar Water Heaters. It was approved on behalf of the Council of Standards Australia on 20 May 2019.

This Miscellaneous Publication was published on 28 June 2019.

The following are represented on Committee CS-028:

Australian Building Codes Board

Australian Chamber of Commerce and Industry

Australian Industry Group

Australian Institute of Refrigeration Air Conditioning and Heating

Clean Energy Council

Clean Energy Regulator

Consumer Electronics Suppliers Association

CSIRO

Electrical Compliance Testing Association of Australia Gas Appliance Manufacturers Association of Australia

James Cook University

Smart Energy Council

Swimming Pool and Spa Association of Australia

University of New South Wales

University of South Australia

Keeping Standards up-to-date

Ensure you have the latest versions of our publications and keep up-to-date about Amendments, Rulings, Withdrawals, and new projects by visiting: www.standards.org.au

Miscellaneous Publication

Modelling of space heating and cooling and ventilation systems, using TRNSYS

First published as SA MP 103:2019.

COPYRIGHT

© Standards Australia Limited 2019

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968 (Cth).

Preface

This Miscellaneous Publication (MP) was prepared by the Standards Australia Committee CS-028, Solar Water Heaters.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Miscellaneous Publication as an Australian only document.

The objective of this document is to provide software tools to support the application of AS 5389, *Space heating and cooling and ventilation systems* — *Calculation of energy and comfort performance* for evaluating the annual energy use and comfort performance of solar heating and cooling systems and ventilation systems in domestic and commercial buildings.

This Miscellaneous Publication is accompanied by additional files for use with third party software.

The additional files may be obtained on purchase of the Miscellaneous Publication in the following manner:

- (a) USB Flash drive containing a Zip file, for hard copy purchasers.
- (b) Zip file for PDF purchasers, to be downloaded from the website of purchase.

Delivery methods for the additional files may change over time.

The additional files shall only be used or reproduced by an authorized user in a way that meets the requirements of this Miscellaneous Publication. They shall not be used for any other purpose.

Standards Australia Limited accepts no responsibility arising out of or in connection with the use of the additional files or access to any third party software.

Contents

Pr	reface	ii
1	Scope and general	1
	1.1 Scope	1
	1.2 Application	
	1.3 Normative references	
	1.4 Definitions	1
	1.5 Notation	2
2	Building models	2
	2.1 General	
	2.2 Domestic house model	
	2.3 Commercial building model	
	2.4 Adding components to building models	
3	Desiccant air conditioner model	5
	3.1 General	
	3.2 Cooling test set-up	
	3.3 Generation of the TYPE 303 input data files	9
	3.4 TRNSYS example deck	
	3.5 Source code	11
4	Solar air heating collector model	11
•	4.1 General	
	4.2 Test set-up	
	4.3 Generation of the TYPE 352 input data parameters	
	4.4 Deck examples for use with TRNSYS	
	4.5 Source code	16
5	Ventilator system model	16
	5.1 General	
	5.2 Fan-forced ventilation of occupied space and roof cavity	
	5.3 Fan-forced and natural circulation ventilator system fitted to roof cavity	
6	Direct evaporative cooler model	18
	6.1 General	
	6.2 Test set-up	19
	6.3 Generation of the TYPE 336 input parameters	
	6.4 Example input files	21
	6.5 Source code	22
7	Indirect evaporative cooler model	22
	7.1 General	
	7.2 Test set-up	23
	7.3 Generation of the TYPE 335 input data file	
	7.4 Example input files	
	7.5 Source code	26
8	Sample input files for use with TRNSYS	2.7
_	8.1 General	
Ri	hliography	29



The is a new provider i arenade and chare publication at the limit below	This is a free preview.	Purchase the	entire publication	at the link below:
--	-------------------------	--------------	--------------------	--------------------

Product Page

- Dooking for additional Standards? Visit Intertek Inform Infostore
- Dearn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation