AIR CONDITIONING and VENTILATION

FUNDAMENTAL TO PRACTICAL

ASST. PROF. DR. NOPPARAT KATKHAW

SI and IP Units

ENGLISH VERSION

Air Conditioning and Ventilation
Fundamental to Practical
Featuring both SI and I-P units

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Subjects:
1. Engineering—Mechanical
2. Engineering—Air Conditioning and Ventilation
3. Engineering—Pump and Piping System
4. Engineering—Fan and Duct System

Cover Design: Peerachat Upkaew, FitFactFun
Interior Design: Asst. Prof. Dr. Nopparat Katkhaw

First English Edition, Based on 4th Thai Edition

Prefix

Today's engineering students often struggle with attention during long lectures, dislike note-taking, and miss recording key concepts. These issues are not solely the students' fault; rather, they point out the need for instructors to adapt their teaching strategies. However, many university-level instructors — especially in engineering — may not be well-equipped with educational psychology or classroom engagement techniques.

One effective solution I've found through years of teaching and professional experience is the use of a well-designed textbook. A book with clear explanations, real-world examples, and dual-unit presentation can empower students to learn independently and grasp complex systems with confidence.

While the ASHRAE Handbooks, SMACNA, and CARRIER references are invaluable in professional HVAC practice, they are often too comprehensive and fragmented for structured teaching. Therefore, this book was developed to bridge that gap. Drawing from my two decades of experience in HVAC system design, university teaching, and on-site engineering instruction, this book presents essential HVAC content in a streamlined and practical format.

The book integrates real-world examples, including both SI and I-P units, to align with global usage patterns. Mixed units often appear in engineering documents across the US, Europe, and Asia, so this approach ensures the content is flexible and globally relevant.

Examples' numerical values may slightly deviate from hand-calculated results due to the use of automated software equations that do not round intermediate steps. This decision reflects the accuracy and workflow common in professional engineering practice.

I hope this book supports learners, educators, and professionals alike — making complex HVAC knowledge both accessible and applicable.

Assistant Professor Dr. Nopparat Katkhaw

April 2025

Acknowledgments

This book was made possible through the encouragement and support of the administrators of the Facebook group “Sharing Knowledge on Air-Conditioning and Sanitary Systems.” I would like to express my sincere gratitude to Mr. Patthana Mekkham, Mr. Suwatchai Jungjitdamrong, Mr. Nattapong Meema, Mr. Jakkrapong Phrommool, Mr. Ekkul Khamsana, Mr. Chatchai Chutimaton, Ms. Rinlapat Thapdirek-lap, Mr. Peerasut Chai-Srimaneepan, and Mr. Wanchaileum Peerapatphoom for their knowledge, advice, and valuable guidance in the process of writing this book.

I humbly dedicate this work to my father, Mr. Dilok, and my mother, Mrs. Chaliao Katkhaw, who gave me both life and the opportunity for education. I also pay my deepest respects to my teachers—Mr. Samart Methnawin, Mr. Kiri Thirasin, and Mr. Atipong Nantaphan—and all my former supervisors who imparted to me their expertise in the field of air-conditioning.

I would also like to thank my colleagues, my family, my wife, and my child for their constant encouragement and unwavering support, which made this work possible.

Assistant Professor Dr. Nopparat Katkhaw
April 2025

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