

Chapter 39—The Heat Pump. This is a new chapter giving information on the fundamentals, types, components, performance, design, and selection of heat pumps.

Chapter 40—Evaporative Apparatus for Heat Rejection. This is a new chapter giving information on water-cooling methods and equipment. Cooling tower theory, design, selection, operation, and maintenance are discussed. New data on spray performance are included.

Chapter 41—Evaporative Air Cooling and Humidification. This is a new presentation of the operation of air washers and their use for humidification and dehumidification. New information is given on evaporative cooling, types of equipment, and design methods. Several new illustrations were used.

Chapter 42—Dehumidification by Sorbent Materials. This chapter has been rewritten to include current information on solid and liquid sorption systems. A new section has been added on use of sorbents at elevated pressures. New illustrations were included.

Chapter 43—Automatic Control. This chapter was rewritten and enlarged to include 18 new cuts showing application of controls for various operations. The description of control types and operation has been extended.

Chapter 44—Instruments and Measurements. This chapter has been brought up to date by extensive revision.

Chapter 45—Motors and Motor Controls. The section on classification of motors has been revised to indicate the nomenclature adopted by the National Electric Manufacturers Association.

The Guide Committee is pleased to give credit for Preparation of Guide material for this edition to the ASHAE Technical Advisory Committees, particularly those on Evaporative Cooling, Heat Pump, Heating and Air-Conditioning Loads, Hot Water and Steam Heating, Insulation, and Sorption. The staff of the ASHAE Research Laboratory has rendered valuable assistance to these committees. Many trade associations, engineering societies, and other organiza-

P. R. ACHENRACH	F. R. ELLENBERGER
E. R. AMBROSE	R. B. ENGDALH
R. S. ASH	L. F. FLAGG
G. C. F. ASKER	W. F. FRIEND
D. R. BAKER	L. R. FULLER
G. L. BIEHN	R. S. FUNK
WILLIAM BINGHAM	ALBERT GIANNINI
R. L. BOYD, JR.	E. W. GIFFORD
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G. F. CARLSON	E. A. GREENLEE
J. R. CARROLL	C. A. GUSTAFSON
C. A. CARTER	E. G. HANSEN
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D. N. CROSTHWAITE, JR.	J. M. HARTMAN
L. F. CHRISTOFFERSON	H. G. HAYS
J. H. CLARKE	H. R. HEIPLE
S. F. DUNCAN	N. E. HILL
H. S. DUTCHER	

The Guide Committee takes pleasure in presenting to the Society this 1959 volume in its new format,

Chapter 46—Residential Summer Air Conditioning. A new section on gas-fired year-round air conditioners has been added.

Chapter 47—School Systems. This chapter has been rewritten with emphasis on factors affecting the heating and cooling loads. Various types of heating, cooling, and ventilating systems are discussed.

Chapter 48—Transportation Air Conditioning. The section on control of passenger bus air conditioning has been revised.

Chapter 49—Snow Melting. A new chapter has been added giving a method of designing snow-melting systems. New tables and data are included.

Chapter 50—Corrosion and Water-formed Deposits, Causes and Prevention. The section on use of resistant metals has been improved.

Chapter 51—Water Services. The charts for friction loss have been enlarged. The section on electric water heating has been transferred to this chapter from the chapter on electric heating.

Chapter 52—Codes and Standards. Several new standards have been added and the correct editions of listed standards have been indicated.

In addition to the changes in specific chapters outlined, numerous improvements have been made in both text and illustrations.

A complete index to Technical Data is contained in a 16-page section at the front of THE GUIDE.

For convenient reference to equipment to be selected for various types of installations, this book contains a Catalog Data Section showing products of 309 manufacturers of heating, ventilating, cooling, and air-conditioning equipment. This section is preceded by a 16-page index listing equipment available under numerous headings for most convenient use.

tions mentioned in the text, in addition to individual engineers, both Society members and nonmembers, have contributed new material or reviewed present material to establish its authenticity. While it is impossible to recognize all sources of information and help, the Guide Committee is pleased to mention the following, who have been very active in preparation of this volume:

W. O. HUERNER	J. T. MULLER
C. M. HUMPHREYS	W. M. MYLER, JR.
LEO HUNGERFORD	EUGENE O. OLSON
N. J. JANISSE	C. H. PESTERFIELD
F. A. JOY	C. W. POLLOCK
C. F. KAYAN	C. F. PRIDMORE
G. A. KELLEY	T. F. ROCKWELL
W. F. KIRKA	J. R. SCHREINER
W. B. KIRK	C. G. SGOELER
J. L. KLINE	J. E. SEITER
J. D. KROSKER	CLIFFORD STROCK
H. R. LIMBACHER	B. L. STURDEVANT
R. LISSON	E. R. TESKE
R. A. LOCKE	H. C. S. THOM
R. D. MADISON	J. M. VAN NIEUKERKEN
W. L. MCGRATH	P. N. VINTNER
S. W. MILLER	G. D. WINANS
	V. D. WISSMILLER

which should make the book more valuable than any preceding edition to its users.

GUIDE COMMITTEE

W. P. CHAPMAN	H. W. ALTEA, Chairman	R. L. MAHER
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J. R. DUNCAN	N. B. HUTCHESON	E. F. SNYDER, JR., Ex-Officio
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	CARL H. FLANK, Technical Secretary	

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