



**ENERGY ANALYSIS ALGORITHMS FOR DUAL
CAPACITY GSHP SYSTEMS FOR HOT 2000™**

PREPARED FOR:

Energy Technology Branch/CANMET
Department of Natural Resources Canada
Ottawa, Ontario
DSS Contract No. 23440-3-9684
February, 1995

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CITATION

Caneta Research Inc., *Energy Analysis Algorithms for Dual Capacity GSHP Systems for HOT 2000*. Call-up File No. 23440-3-9684. Efficiency and Alternative Energy Technology Branch, CANMET, Department of Natural Resources Canada, Ottawa, Ontario, 1994 (26 pages)

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NOTE

Funding for this project was provided by the Federal Panel on Energy Research and Development, Department of Natural Resources.

Minister of Supply & Services Canada 1995
Catalogue No. M91-7/335-1995E
ISBN. 0-662-23519-3

ABSTRACT

This is a report of efforts to develop normalised capacity and efficiency curves, as a function of entering water temperature (EWT), for use in a performance prediction algorithm for dual capacity (2 speed or dual compression) ground source heat pumps (GSHPs). The report describes current products in the market and how they operate and develop normalized capacity and efficiency equations from performance characteristics of two-speed and dual compressor systems. Attempts to develop similar equations for direct-expansion GSHPs were unsuccessful as there is limited reliable test data at this time.

RÉSUMÉ

Le rapport fait état des efforts déployés dans le but d'élaborer des courbes de capacité et d'efficacité normalisées en tant que fonction de la température de l'eau d'arrivée, que l'on utilisera ensuite dans un algorithme de prévision de performance d'une pompe géothermique à deux vitesses. Le rapport décrit les produits actuellement disponibles sur le marché et comment ils fonctionnent; il décrit l'élaboration d'équations de capacité et d'efficacité se rapportant aux caractéristiques de performance des systèmes à deux vitesses et à double compression. Des tentatives pour élaborer des équations semblables concernant les pompes géothermiques à détente directe ont échoué parce qu'il n'existe pas, à l'heure actuelle, de résultats d'essais fiables.

CONTENTS

	PAGE
ABSTRACT/ABSTRAIT	ii
CONTENTS	iii
LIST OF FIGURES	iv
INTRODUCTION	1
COMPRESSOR OPERATION	1
INDOOR BLOWER OPERATION	2
EWT ALGORITHM	3
NORMALIZED HEATING CAPACITY AND COP EQUATIONS	4
NORMALIZED COOLING CAPACITY AND EER EQUATIONS	6
DIRECT-EXPANSION ALGORITHM	8
CONCLUSIONS	8
REFERENCES	9
APPENDIX A	Manufacturer's Data for Normalized Heat Pump Equations
APPENDIX B	Entering Water Temperature Algorithm from Reference [1]

LIST OF FIGURES

- Figure 1 Heating Capacity Normalized WRT 10 C Entering Water Temperature with a 2 speed Compressor
- Figure 2 COP Normalized WRT 10 C Entering Water Temperature - 2 speed Compressor
- Figure 3 Heating Capacity Normalized WRT 10 C Entering Water Temperature with Dual Compressors
- Figure 4 COP Normalized WRT 10 C Entering Water Temperature with Dual Compressors
- Figure 5 Cooling Capacity Normalized WRT 10 C Entering Water Temperature with a 2 speed Compressor
- Figure 6 EER Normalized WRT 10 C Entering Water Temperature with a 2 speed Compressor
- Figure 7 Cooling Capacity Normalized WRT 20 C Entering Water Temperature with Dual Compressors
- Figure 8 EER Normalized WRT 20 C Entering Water Temperature with Dual Compressors