

PACKAGE ID - 000552IBMPC00 HEAT PUMP MODEL

KWIC TITLE - Predicts the Steady-State Heating and Cooling
Performance of Electric Heat Pump

AUTHORS - Fischer, S.K.
Oak Ridge National Lab., TN (United States)

Rice, C.K.
Oak Ridge National Lab., TN (United States)

Jackson, W.L.
Oak Ridge National Lab., TN (United States)

LIMITATION CODE -UNL **AUDIENCE CODE** - UNL

COMPLETION DATE - 01/13/1993 **PUBLICATION DATE** - 03/01/1988

DESCRIPTION - Oak Ridge National Laboratory (ORNL) is a leader in the development of analytical tools for the design of electrically driven, air-to-air heat pumps. Foremost among these tools is the ORNL Heat Pump Design Model, which can be used to predict the steady-state heating and cooling performance of an electrically driven, air-source heat pump. This version is three to five times faster than the earlier version, easier to use and more versatile.

PACKAGE CONTENTS - Software Abstract; ORNL/TM-10192; Media Directory;

SOURCE CODE INCLUDED? - Yes

MEDIA QUANTITY - 4 5.25 Diskettes

METHOD OF SOLUTION - The HEAT PUMP MODEL allows the user to specify: system operating conditions, compressor characteristics, refrigerant flow control devices, fin and tube heat exchanger parameters, fan and indoor duct characteristics, and any of ten refrigerants. The model will compute: system capacity and COP (or EER), compressor and fan motor consumptions, coil outlet air dry and wet bulb temperatures, air and refrigerant side pressure drops, a summary of the refrigerant side states throughout the cycle, and overall compressor efficiencies and heat exchanger effectiveness.

COMPUTER - IBM PC

OPERATING SYSTEMS - DOS

PROGRAMMING LANGUAGES - FORTRAN

SOURCE CODE AVAILABLE (Y/N) - Y

REFERENCES - S.K. Fischer, C.K. Rice, and W.L. Jackson, The Oak Ridge Heat Pump Design Model: Mark III Version Program Documentation, ORNL-TM-10192, March 1988.

PACKAGE ID - 000552IBMPC00 HEAT PUMP MODEL

REFERENCES - (CONT)

ABSTRACT STATUS - Submitted March 1988.

SUBJECT CLASS CODE - T

KEYWORDS -

COMPUTER PROGRAM DOCUMENTATION
H CODES
PERFORMANCE
EVALUATION
DESIGN
HEAT TRANSFER
EFFICIENCY
HEATING
COOLING

EDB SUBJECT CATEGORIES -

990200 320106 420400

SPONSOR - DOE/ER

PACKAGE TYPE - AS - IS