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DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DS, AND
GS MAINTENANCE MANUAL

AIR CONDITIONER: COMPACT,
VERTICAL

208, 3 PHASE: 18,000 BTUH COOLING
12,000 BTUH HEATING (TRANE MODELS)

50/60 HERTZ MODEL CE20VAL6

FSN 4120-00-973-4589

400 HERTZ MODEL CE20VAL4

FSN 4120-00-858-5795

This copy is a reprint which includes current
pages from Changes 1 through 4.



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HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., 21 November 1969

OPERATOR, ORGANIZATIONAL, DIRECT AND GENERAL SUPPORT MAINTENANCE MANUAL

**AIR CONDITIONER: COMPACT, VERTICAL; 208 V, 3 PHASE; 18,000 BTUH COOLING,
12,000 BTUH HEATING (TRANE MODELS) 50/60 HERTZ MODEL CE20VAL6
FSN 41 20-973-4589; 400 HERTZ MODEL CE20VAL4 FSN 4120-858-5795**

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

a. This manual is published for the use of personnel to whom Military Models CE20VAL4 and CE20VAL6 air conditioners are issued. Information is provided on operation, preventive maintenance services, destruction, and organizational, direct, and general support maintenance of equipment, accessories, components, and attachments. Also included are descriptions of main units and their relationship to other components.

b. Numbers in parentheses on illustrations indicate quantity. Numbers preceding nomenclature callouts on illustrations indicate the preferred maintenance sequence.

1-2. Forms and Records

a. DA Forms and procedures used for equipment maintenance will be only those prescribed by TM 38-750.

b. The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to the Commanding General, U.S. Army Mobility Equipment Command, ATTN: AMSME-MPP, 4300 Goodfellow Boulevard, St. Louis, MO. 63120.

Section II. DESCRIPTION AND DATA

1-3. Description

a. *General.* The air conditioner (figs. 1-1 and 1-2) is used primarily in van type enclosures for providing filtered, conditioned, or heated air as required to maintain service conditions necessary for the efficient operation of electronic equipment and for the comfort of operating personnel housed within the vans. It is a completely self-contained, air cooled, electric motor driven unit designed for continuous operation with varying loads. It is equipped with internal ducting to the low side of the evaporator fan so that ventilation air from the chemical and biological filter unit may be supplied by the evaporator fan.

b. *Condensing Section.* The condensing section, located at the bottom of the unit, contains the hermetically sealed compressors, condensing coil, condenser air intake opening, condenser air discharge opening, control panel, control box, thermostatic switch, power receptacle connector, condenser fan, blower motor, dehydrator, suction and discharge valves, and solenoid valves.

c. *Evaporator Section.* The evaporator section, located in the top of the unit, contains an evapo-

rator coil, evaporator fan, air conditioning filter, intake and discharge grilles, evaporator coil drain pan, expansion valves, electrical heaters, sight glass, and a damper to regulate the amount of outdoor air entering the air conditioner.

1-4. Identification and Tabulated Data

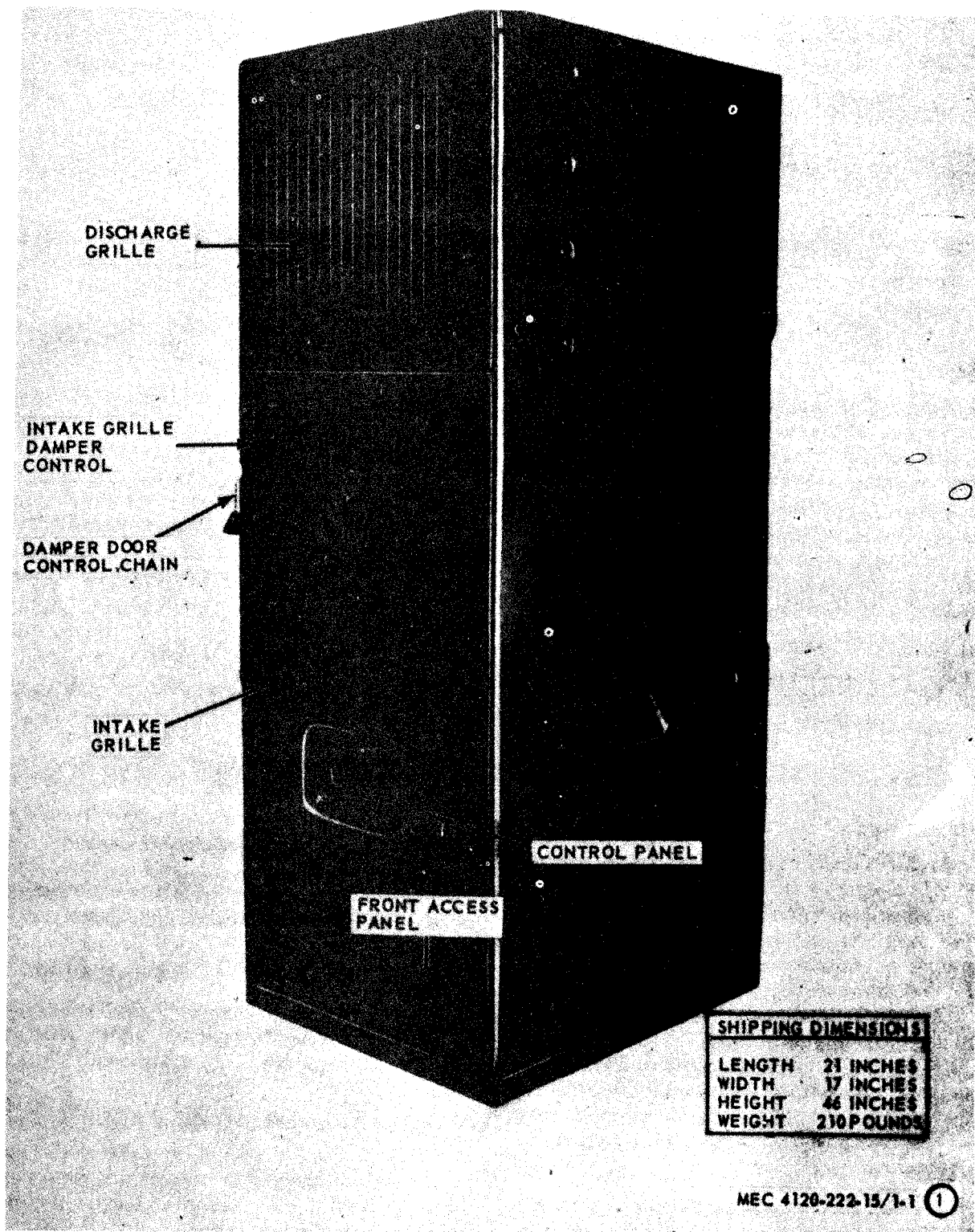
a. *Identification.* The air conditioners have eleven major identification and instruction plates. Information contained on these plates is listed below.

(1) Air conditioner (Model CE20VAL4)

(a) *Corps of Engineers plate A.* Located near top of back panel. Specifies nomenclature, manufacturer, model number, serial number, dimensions, weight and capacity

(b) *Manufacturer's identification plate.* Located on rear panel just below sight glass. Specifies model number and serial number of the unit.

(c) *Compressor identification plates.* Located on front of compressor housing. Specifies compressor model number, part number, serial number, refrigerant, oil type and capacity, manufacturer, and complete electrical data.



① Left front three-quarter view, with shipping dimensions

Figure 1-1 ① Air conditioner, left front three-quarter view, with shipping dimensions. (Sheet 1 of 2)

Figure 1-1. Air conditioner.