

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

**OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT,
GENERAL SUPPORT, AND DEPOT MAINTENANCE MANUAL**

**AIR CONDITIONER, COMPACT VERTICAL, 208V, 3 PHASE,
18,000 BTUH COOLING: 12,000 BTUH HEATING,
50/60 HERTZ, AMERICAN AIR FILTER MODEL CH620-2,**

FSN 4120-168-1781

This copy is a reprint which includes current pages from Changes 1 through 9.
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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

a. This manual is published for use by personnel to whom the Model CH620-2 Air Conditioner is issued. Chapters 1 through 3 include description, operating instructions, and operator and organizational maintenance instructions. Chapter 4 contains information for shipment, storage, and demolition. Chapters 5 and 6 provide instructions for direct support, general support, and depot maintenance.

b. Appendix A contains a list of publications applicable to this manual. Appendix B is a list of basic issue items authorized for the operator of this equipment. Appendix C contains the maintenance allocation chart.

1-2. Forms and Records

a. DA forms and records used for equipment maintenance will be only those prescribed in TM 3%750.

b. Report 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 fig. 1-1 and 1-2) is used primarily in van-type enclosures for providing filtered, cooled, or heated air as required to maintain conditions necessary for the efficient operation of electronic equipment and for the comfort of operating personnel within the enclosure. 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, such that filtered air from a chemical and biological filter unit may be ducted to the evaporator fan and coil.

b. *Condensing Section.* The condensing section, located at the bottom of the unit, contains the hermetically sealed compressor, pressure relief valve, check valve, condensing coil, condenser air intake opening, condenser air discharge opening, control panel, junction box, thermostat, power receptacle, RFI filter, condenser fan, dehydrator, and compressor solenoid valve.

c. *Evaporator Section.* The evaporator section, located at the top of the unit, contains an evaporator coil, condenser and evaporator fans and motor, air conditioning filter, mist eliminator, intake and discharge grilles, evaporator coil drain

pan, expansion valves, pressure equalizing solenoid valve, pressure regulator valve, electric heaters, sight glass, high-and low-pressure cutout switches, suction and discharge service valves, and a damper to regulate the amount of outdoor air entering the air conditioner.

1-4. Identification and Tabulated Data

a. *Identification.* The air conditioner has twelve major identification and instruction plates. Information contained on these plates is listed below.

(1) Corps of Engineers' plate, located near top on rear access cover, specifies nomenclature, manufacturer, model number, serial number, dimensions, weight, and capacity.

(2) Manufacturer's identification plate, located on rear panel just below sight glass, specifies model number and serial number of unit.

(3) Compressor identification plate, located on compressor housing, specifies compressor model number, part number, serial number, manufacturer; refrigerant type, oil type and capacity, and electrical data.

(4) Fan motor identification plate, located on fan motor, specifies motor horsepower, type,

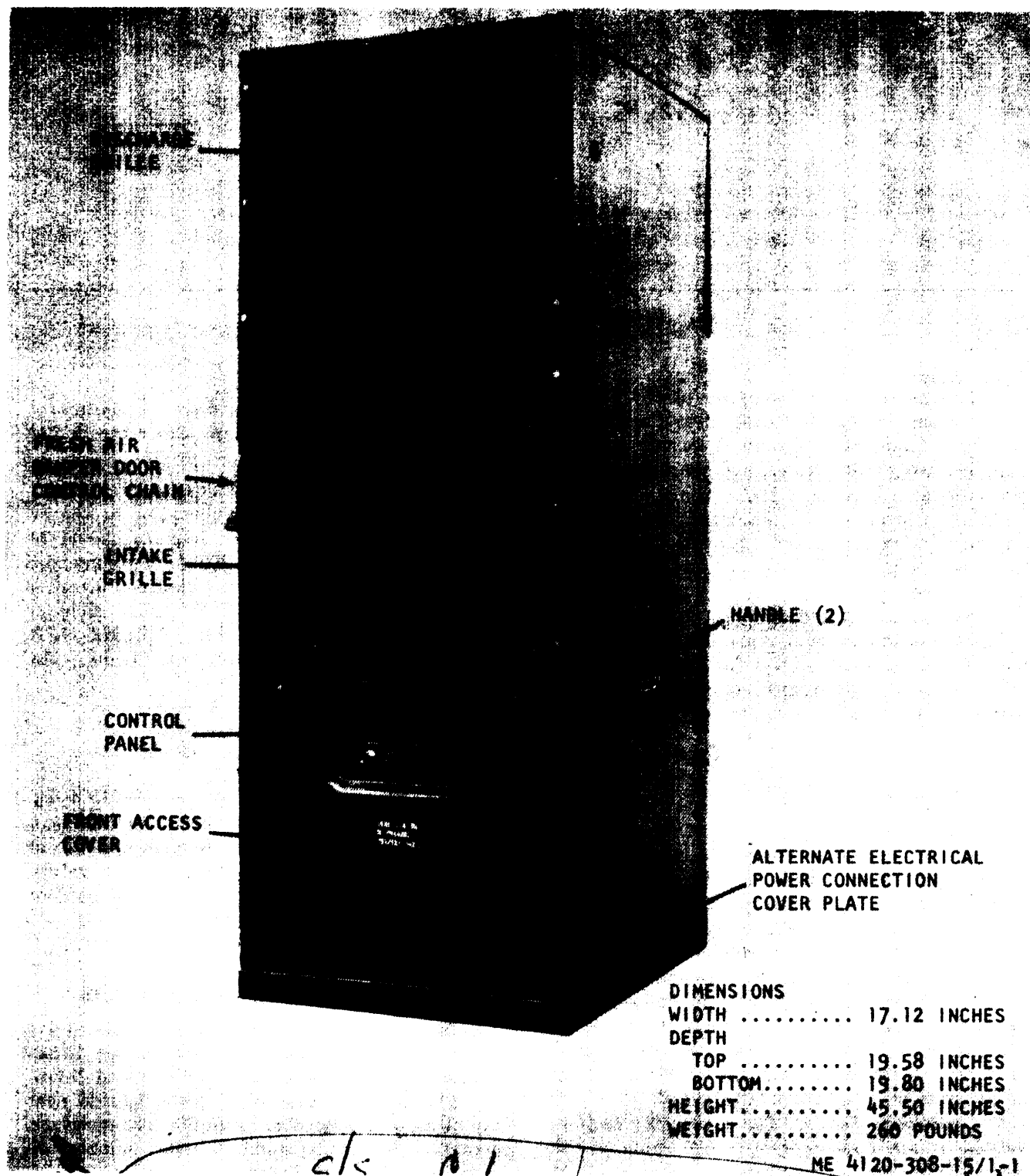


Figure 1-1. Air conditioner, left front three-quarter view, with shipping dimensions.

serial number, revolutions per minute, part number, and electrical characteristics.

(5) Control panel plate, located on control panel at front of unit, indicates operating mode, temperature setting, and fan speed.

(G) Wiring diagram plate, located on inside of front access cover, illustrates unit wiring.

(7) Refrigerant-22 plate, located on rear access cover above condenser fan guard, indicates refrigerant type and amount of charge.

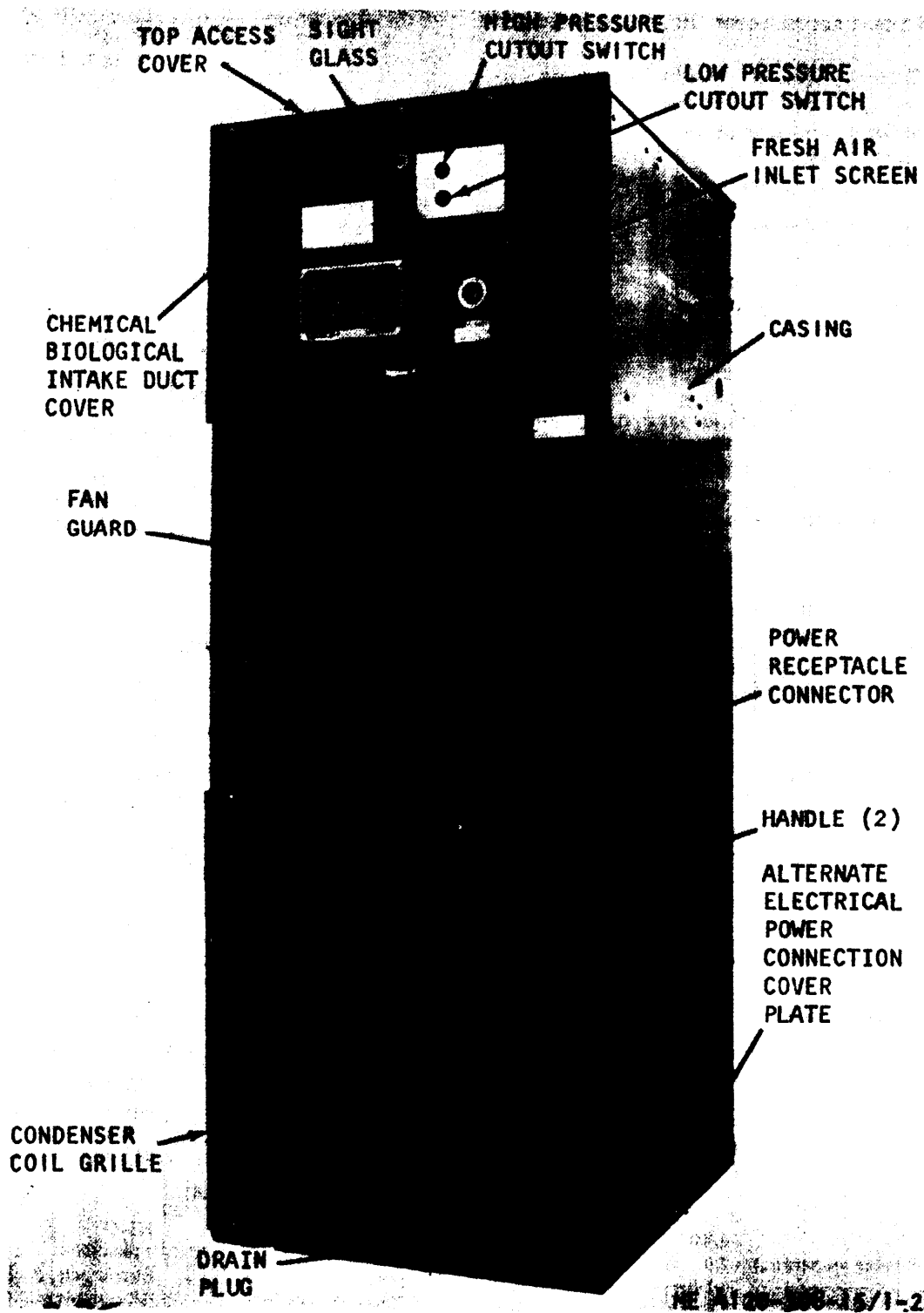


Figure 1-2. Air conditioner, right rear three-quarter view.

(8) Color indicating plate, located on rear access cover immediately below the refrigerant sight glass, has three color bands; green, char-treuse, and yellow, which are used in conjunction with the sight glass to determine moisture content of the refrigerant system.

(9) High- and low-pressure cutout switch

reset plate, located on rear access cover, identifies the high-and low-pressure cutout switch reset buttons.

(10) Indicating arrow plate, located on rear access cover just above condenser fan guard, indicates the direction of fan rotation.

(11) Refrigeration fluid diagram, located on