

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE MANUAL

AIR CONDITIONER: COMPACT VERTICAL 208V, 3 PHASE,
18,000 BTUH COOLING; 12,000 BTUH HEATING

(AMERICAN AIR FILTER MODELS)

CH-420-1, 400 HERTZ, FSN 4120-909-0388

CH-620-1, 50/60 HERTZ, FSN 4120-909-0387

This reprint includes all changes in effect at the
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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

This manual is published for the use of personnel to whom the compact air conditioner is issued. Chapters 1 through 3 provide information on installation, operation, preventive maintenance, and operator's and organizational maintenance of the equipment, accessories, components, and attachments. Chapter 4 provides information on shipment and limited storage, and demolition of the equipment. Chapters 5 and 6 provide instruction for direct support and general support. Also included are descriptions of main units and their relationships to other components.

1-2. Forms and Records

a. DA Forms and procedures used for equipment maintenance will be only those prescribed in TM 88-750 (Army Equipment Record Procedures).

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 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.* These air conditions (fig. 1-1 and 1-2) are used primarily in van-type enclosures. The units provide filtered, conditioned, or heated air, as required, to maintain the service conditions necessary for the efficient operation of electronic equipment in the vans. The conditioners also provide for the comfort of operating personnel housed within specified vans. The units are completely self-contained, air-cooled, electric motor driven, and designed for continuous operation under varying loads. These units are equipped with internal ducting to the low side of the evaporator fan so that ventilation air from a chemical-biological filter may be supplied by the fan. The units furnish 12,000 BTUH for heating and 18,000 BTUH for cooling.

b. *Condenser Section.* The condenser section, located in the lower compartments, contains the hermetically sealed compressor, condenser coil, control panel and box, thermostatic switch, blower motor, service valves, and condenser fan.

c. *Evaporator Section.* The evaporator section, located in the upper compartment contains an evaporator coil drain pan, expansion valves,

electrical heaters, sight glass, and evaporator fan.

1-4. Identification and Tabulated Data

a. *Identification.*

(1) *Air Conditioner (Model CH420-1).*

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

(b) *Manufacturers identification plate.* Located on rear panel just below sight glass. Specifies nomenclature, manufacturer, model number, serial number of the unit.

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

(2) *Air conditioner (Model CH-620-1).*

(a) *Corp of Engineers plate A.* Located above fan guard on back panel of unit. Specifies nomenclature, manufacturer, model number, serial number, dimensions, weight, and capacity.

(b) *Compressor identification plate.* Lo-

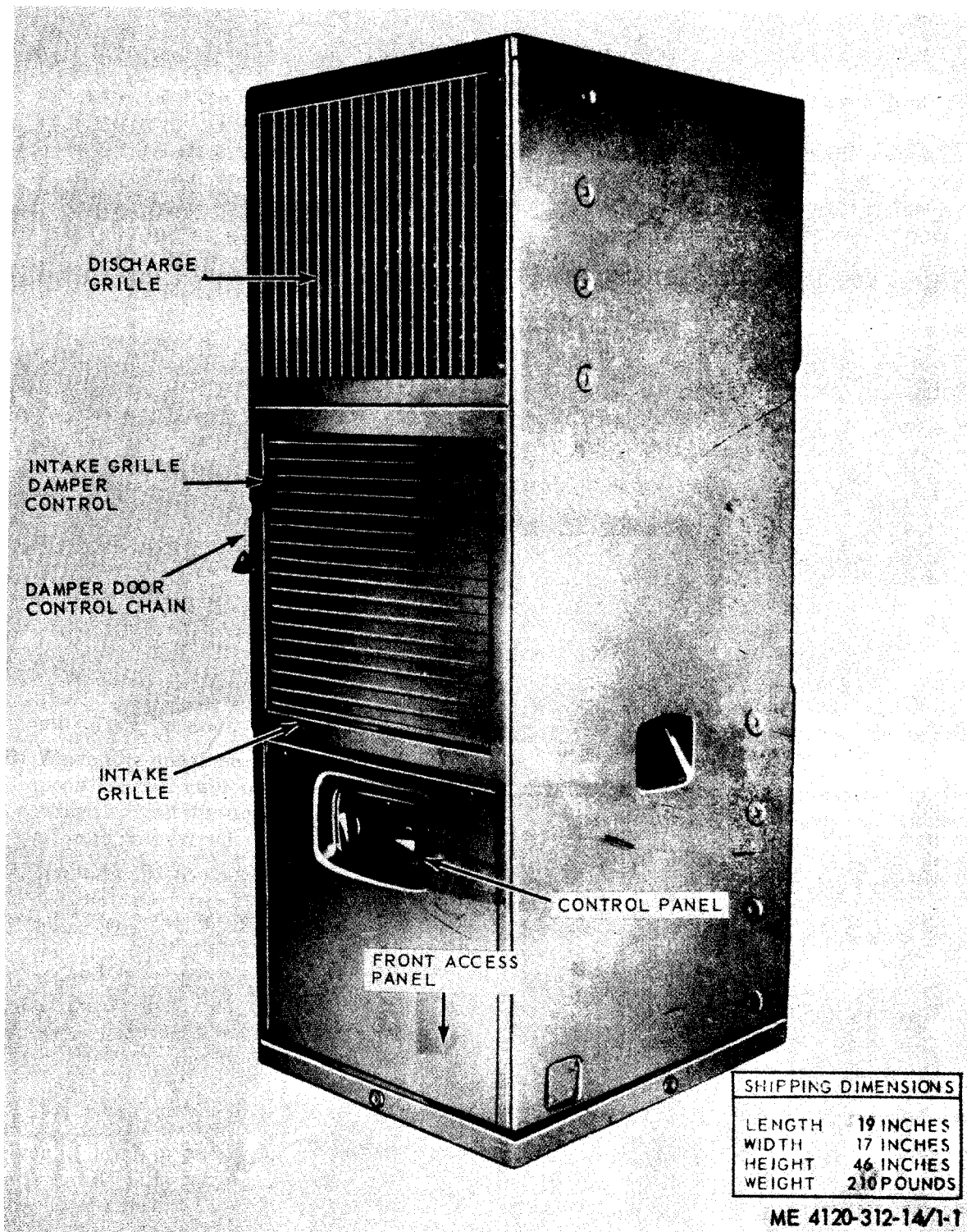


Figure 1-1. Air conditioner, front three-quarters view w/shipping dimensions.

cated on front of compressor housing and compressor crankcase. Specifies compressor model number, part number, serial number, refrigerant, manufacturer, and complete electrical data.

(3) *Identificatication applicable to both models.*

(a) *Blower motor identification.* Located on top of the blower motor. Specifies motor horsepower, type, serial number, rpm's (revolutions per minute) part number, order number, and electrical characteristics.