TECHNICAL MANUAL

OPERATOR'S, UNIT, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL

AIR CONDITIONER, COMPACT, VERTICAL 208-VOLT, 3 PHASE, 60,000 BTU/HR 50/60 HERTZ

KECO MODEL F60T-2
NSN 4120-00-935-5416 (EIC: VTN)

HARVEY W. HOTTEL, INC.
MODEL CV 60-6/6-08
NSN 4120-00-935-5416

KECO MODEL F60T-2A
NSN 4120-01-181-6060

UNIFAB INDUSTRIES, MODEL CV-60-5/6-08
NSN 4120-01-213-5980

- **This manual supersedes TM 5-4120-357-14, dated 9 May 1980.**

HEADQUARTERS, DEPARTMENT OF THE ARMY
31 August 1993

Technical Manual
No. 9-4120-357-14

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 31 August 1993

OPERATOR'S, UNIT, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL AIR CONDITIONER, COMPACT, VERTICAL 208-VOLT, 3 PHASE, 60,000 BTU/HR 50/60 HERTZ KECO MODEL F60T-2 NSN 4120-00-935-5416 HARVEY W. HOTTEL, INC. MODEL CV 60-6/6-08 NSN 4120-00-935-5416 KECO MODEL F60T-2A NSN 4120-01-181-6060 UNIFAB INDUSTRIES, MODEL CV-60-5/6-08 NSN 4120-01-213-5980

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistake or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. A reply will be furnished directly to you.

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CHAPTER 1
INTRODUCTION

Section I. GENERAL INFORMATION

1-1. Scope.
This manual is issued for the use of personnel who have the responsibility for service, operation and maintenance of the Air Conditioner, Compact, Vertical, Model F60T-2 and F60T-2A, manufactured by Keco Industries, Inc., Cincinnati, Ohio; Model CV-60-5/6-08, manufactured by Unifab Industries, Inc., Red Lion, Pennsylvania. Chapters 1 through 3 provide information required for set-up, operation and servicing of the equipment by the operator. Chapter 4 contains detailed maintenance instructions for the use of unit maintenance personnel. Chapters 5 and 6 provide detailed instructions for repair and replacement of components authorized at direct support and general support maintenance levels.

1-2. Purpose.
The air conditioner provides ventilation by either circulating inside air or a mixture of inside and outside air, and is equipped to utilize air passed through a chemical biological-radiological (CBR) filtering system if required. The air conditioner also provides 60,000 Btu/Hr of cooling or 49,000 Btu/Hr heating, both of which are thermostatically controlled to maintain desired comfort levels. During cooling operation, a percentage of dehumidification also occurs, the amount depending upon the degree of humidity present in the atmosphere.

1-3. Special Limitations on Equipment.
The air conditioner is designed to operate at all ambient temperatures between -50°F (-45.6°C) and 120° F (48.9°C) as follows:

	Mode	Temperature	
		Min.	Max
A.	Heating	-50°F(-45.6°C)	90°F(32.2°C)
B.	Cooling	0°F(-17.8°C)	120°F(48.9°C)

This does not necessarily mean that a desirable comfort level can be maintained at extreme temperatures, since the comfort level is dependent upon the heat loss or heat gain of the space to be heated or cooled, and upon whether such heat loss or gain is within the capacity of the air conditioner to supply. When the air conditioner is stopped while in the cooling mode, a period of one minute should be allowed to elapse before attempting to re-start. This period will permit pressures to equalize so that the compressor will not encounter high head-pressures.

1-4. Maintenance Forms and Records.
Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750, The Army Maintenance Management System (TAMMS).

1-5. Reporting Equipment Improvement Recommendations.
Equipment Improvement Recommendations (EIR's) can and must be submitted by anyone who is aware of an unsatisfactory condition with the equipment design or use. It is not necessary to show a new design or list a better way to perform a procedure, just simply tell why the design is unfavorable or why a procedure is difficult. EIR's may be submitted on SF 368. Mail directly to AMSAT-I-MDO, U.S. Army Aviation and Troop Command, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished to you.

1-6. Difference Between Models.
There is no difference between Keco Model F60T-2, F60T-2A and Unifab Industries, Model CV-60-5/6-08.

Section II. EQUIPMENT DESCRIPTION

1-7. Equipment Purpose, Capabilities and Features.
The purpose of the air conditioner is to ventilate, heat, or cool the air in an enclosure, and to provide a comfortable environment for personnel occupying the enclosure. (See Figures 1-1 through 1-4). The unit may

also be utilized to maintain a constant temperature for heat producing equipment such as electrical or electronic apparatus, biological or chemical specimens, and other controlled atmospheres. The modes of operation and the thermostatically controlled temperature are set by a rotary switch and a thermostat mounted on a small control panel in the lower front area of the unit. Controlled amounts of outside air may be mixed into the return air to provide freshness, and delivered air can be ducted to remote spaces, using standard duct work, if required. The control panel of the unit may also be placed in a remote location, if desired.

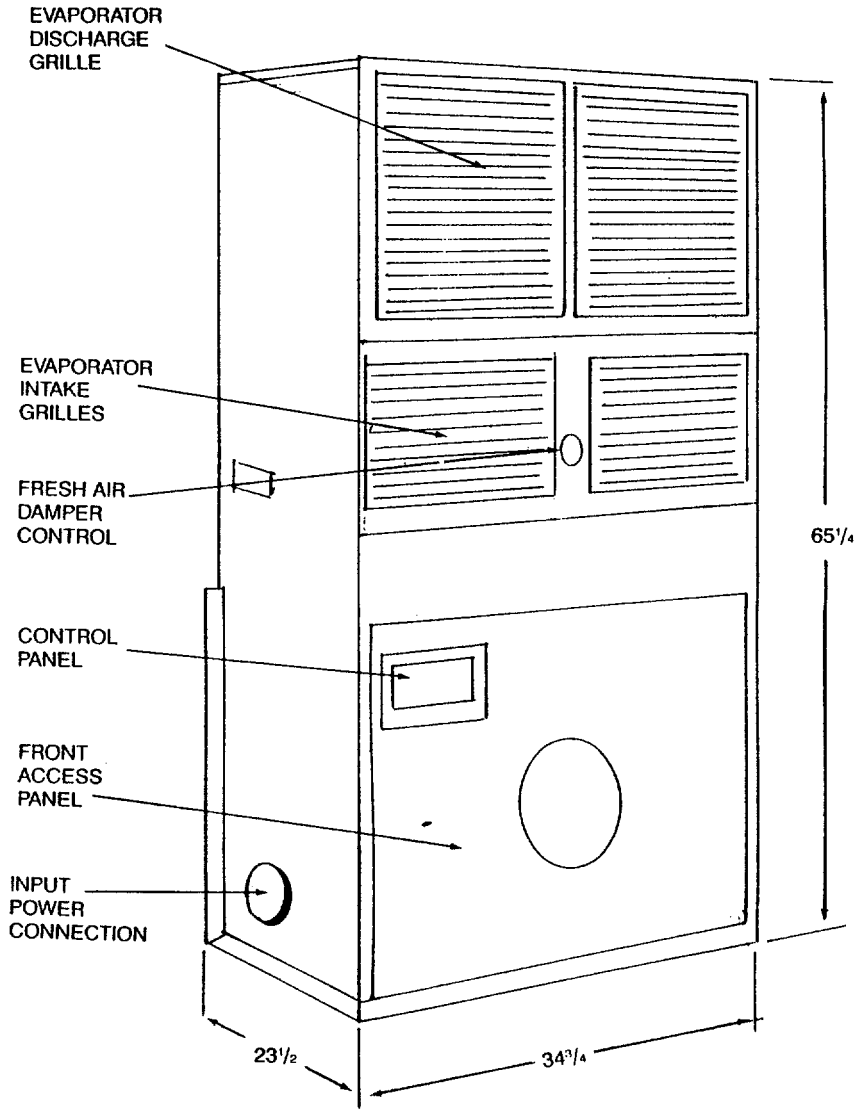

Figure 1-1. Air Conditioner, Front View
(With Shipping Dimensions)

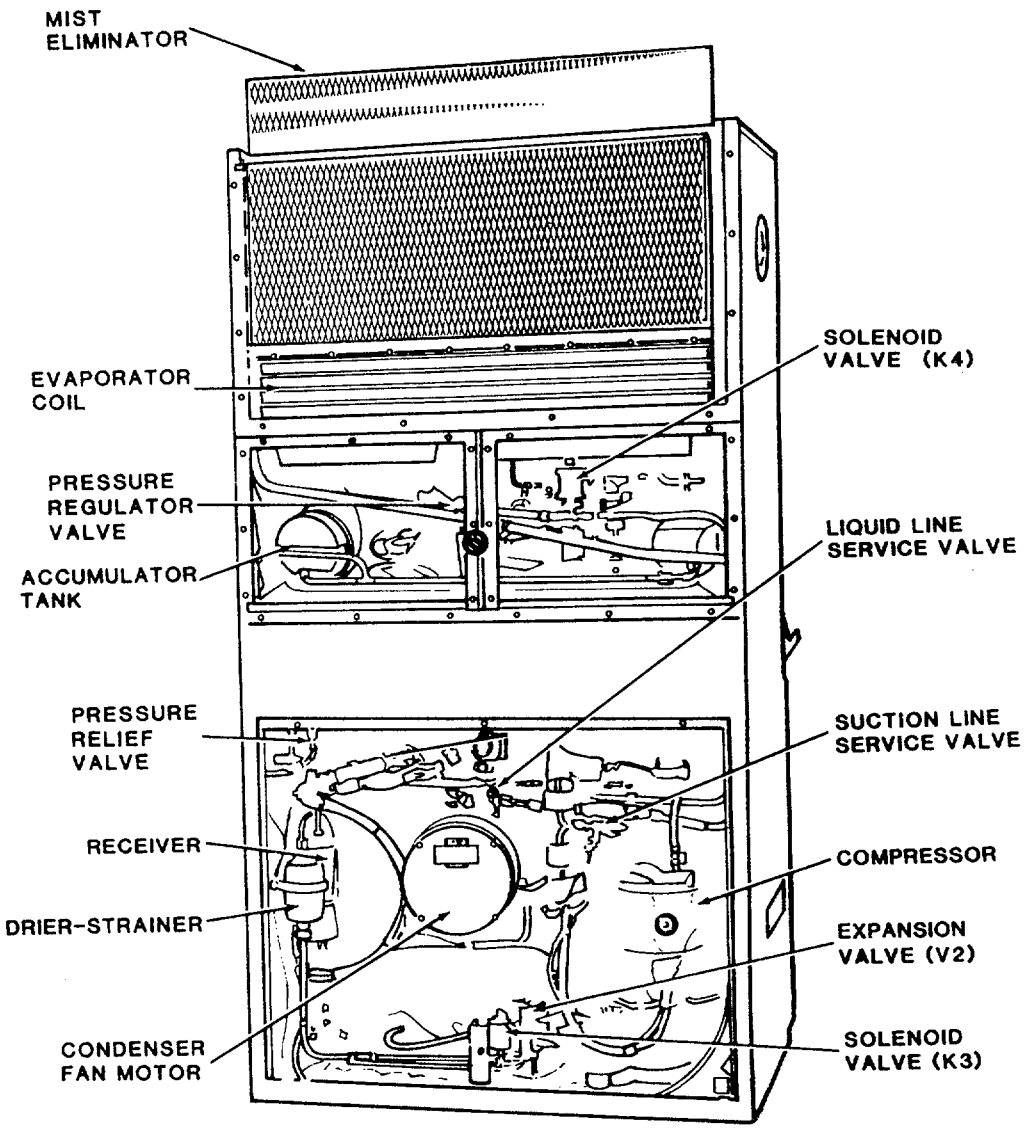

Figure 1-2. Location Major Components (Front)