

TM 5-3431-228-14
TO 34W4-102-1

TECHNICAL MANUAL

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

**WELDING MACHINE, ARC: AC/DC, 300 AMP,
TRANSFORMER RECTIFIER; CONSTANT CURRENT, BASE MOUNTED
(EUTECTIC CORP. MODEL MD301 FED)
FSN 3431-235-4728**

**HEADQUARTERS, DEPARTMENT OF THE ARMY
30 SEPTEMBER 1970**

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

This publication contains descriptive data and information for installing, operating, and maintaining Model MD301 FED Inert Shielded Arc Welding Machine. Chapter 1 contains descriptive data. Chapter 2 contains instructions for installation and operation. Chapters 3 through 7 contain information on preventive maintenance, troubleshooting, disassembly, and repair for various levels of maintenance.

1-2. Forms and Records

- a. DA Forms and records used for equipment

maintenance will be only those prescribed in TM 38-750.

- 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 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. The Eutectic MD301 FED, general and inert gas shielded arc welding machine (fig. 1-1 and 1-2), hereafter called the welding machine, is operated from an external power source of either 230 or 460 volts alternating current and by single phase connection. The welding machine can operate as a tungsten inert gas (TIG) welder when water, inert gas (such as argon or helium) and a TIG torch are pro-

vided. It can also operate as a shielded metal arc welder.

- b. The high frequency and three timer controls which individually control the post-flow of gas and water; preflow of inert gas and spot arc timing are located in a drawer-type frame at the top of the welding machine. The drawer is removable for ease of maintenance.



SHIPPING DIMENSIONS

OVERALL LENGTH	22 IN.
OVERALL HEIGHT	41.5 IN.
OVERALL WIDTH	24 IN.
SHIPPING CUBAGE	12.7 CU FT
SHIPPING WEIGHT	650 LB

ME 3431-228-15/1-1

Figure 1-1. Welding machine right front, three-quarter view with shipping dimensions.