

AWS J1.2M/J1.2:2026
An American National Standard

Guide to Installation and Maintenance of Resistance Welding Machines



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American National Standards Institute
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Guide to Installation and Maintenance of Resistance Welding Machines

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Revises AWS J1.2M/J1.2:2016

Prepared by the
American Welding Society (AWS) J1 Committee on Resistance Welding Equipment

Under the Direction of the
AWS Technical Activities Committee

Approved by the
AWS Board of Directors

Abstract

This guide provides general information pertaining to the installation and maintenance of common types of resistance welding equipment. The user may determine some of this information is an appropriate and useful supplement to equipment or process-specific instructions. Generic preventive maintenance schedules, equipment troubleshooting checklists, and an overview of common weld parameter development techniques are provided.



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Dedication

This revision of AWS J1.2M/J1.2, *Guide to Installation and Maintenance of Resistance Welding Machines*, is respectfully dedicated to the memory of Bill Qualls, who served on the AWS J1 Committee on Resistance Welding Equipment and the J1B Task Group responsible for preparing this guide since 2007.

The Committee sadly misses his leadership, wisdom, and friendship. His commitment and significant contributions to the advancement of resistance welding will live on through this new revision.

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Foreword

This foreword is not a part of this standard but is included for informational purposes only.

The J1 Committee on Resistance Welding Equipment was formed by the American Welding Society in 2005 to establish standards related to the design, construction, calibration, safe operation, and maintenance of resistance welding equipment.

This standard is intended to address the need for basic machine setup and maintenance instructions to enable users to get the most from their resistance welding equipment.

The Resistance Welder Manufacturers Association (RWMA) Bulletin 14:1995 – *Maintenance Manual for Resistance Welding Machines* was the predecessor to the first edition of this AWS publication, J1.2M/J1.2:2016, *Guide to Installation and Maintenance of Resistance Welding Machines*. This second edition has been reformatted to present checklists as forms for easier use and to incorporate updates in technology and experience.

A vertical line in the margin or underlined text in clauses indicates an editorial or technical change from the 2016 edition. All errata to this standard shall be published in the *Welding Journal* and posted on the AWS website.

Comments and suggestions for the improvement of this standard are welcome. They should be sent to the Secretary, AWS J1 Committee, American Welding Society, 8669 NW 36 St, # 130, Miami, FL 33166.

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Guide to Installation and Maintenance of Resistance Welding Machines

1. General Requirements

1.1 Scope. While resistance welding machines vary considerably in size and complexity, there are basic principles applicable to the installation, operation, maintenance, and troubleshooting. This standard is intended to provide basic information to the users of the resistance welding equipment to supplement the instructions and recommendations of the equipment manufacturer. Where there is conflict, the equipment manufacturers' documents shall take precedence.

It is the responsibility of the resistance welding equipment user to ensure the equipment conforms to relevant electrical, mechanical, and operating safety standards.

Further assistance relating to interpretation or applicability of any of the suggestions outlined in this guide shall be obtained from the original machine manufacturer, rebuilder, integrator, other organization or individual qualified to make such a determination.

Although this guide is not written with mandatory requirements, mandatory language, such as the use of "shall", will be found in those portions of the document where failure to follow the instructions or procedures could produce inferior, misleading, or unsafe results.

1.2 Units of Measurement. This standard makes use of both the International System of Units (SI) and U.S. Customary units. The latter are shown within brackets [] or in appropriate columns in tables and figures. The measurements may not be exact equivalents; therefore, each system must be used independently.

1.3 Safety. Safety issues and concerns are addressed in this standard, although health issues and concerns are beyond the scope of this standard.

Safety and health information is available from the following sources:

American Welding Society:

- (1) ANSI Z49.1, *Safety in Welding, Cutting, and Allied Processes*
- (2) AWS Safety and Health Fact Sheets
- (3) Other safety and health information on the AWS website

Material or Equipment Manufacturers:

- (1) Safety Data Sheets supplied by materials manufacturers
- (2) Operating Manuals supplied by equipment manufacturers

Applicable Regulatory Agencies

Work performed in accordance with this standard may involve the use of materials that have been deemed hazardous, and may involve operations or equipment that may cause injury or death. This standard does not purport to address all safety and health risks that may be encountered. The user of this standard should establish an appropriate safety program to address such risks and meet applicable regulatory requirements. ANSI Z49.1 should be considered when developing the safety program.

1.4 Terminology. As used in this specification, the word *shall* (or *must*) denotes a requirement, the word *should* denotes a guideline, and the word *may* denotes a choice.