



Commercial dishwashers



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Standard for Safety for Commercial Dishwashers, UL 921

Third Edition, Dated January 30, 2020

Summary of Topics

This new edition January 30, 2020 includes editorial cleanup and renumbering in addition to revisions to Commercial Dishwashers provided with a heat pump.

The requirements are substantially in accordance with Proposal(s) on this subject dated June 14, 2019 and September 13, 2019.

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CSA Group
CSA/ANSI Z83.21:20 • CSA C22.2 No. 168:20
Third Edition



Underwriters Laboratories Inc.
UL 921
Eighth Edition

Commercial Dishwashers

January 30, 2020



ANSI/UL 921-2020
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This ANSI/UL Standard for Safety consists of the Eighth Edition. The most recent designation of ANSI/UL 921 as an American National Standard (ANSI) occurred on January 30, 2020. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface.

The Department of Defense (DoD) has adopted UL 921 on June 18, 1992. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

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PREFACE

This is the harmonized CSA Group and UL standard for Commercial Dishwashers. It is the Third edition of CSA/ANSI Z83.21 • CSA C22.2 No. 168, and the Eighth edition of UL 921. This edition of CSA/ANSI Z83.21 • CSA C22.2 No. 168 supersedes the previous editions published in 2005 and 2016. This edition of UL 921 supersedes the previous edition published in 2016.

This harmonized Standard was prepared by CSA Group and Underwriters Laboratories Inc. (UL).

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This standard was reviewed by the CSA Joint Subcommittee on Gas Food Service Equipment under the jurisdiction of the CSA Z21/83 Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories and the CSA Strategic Steering Committee on Fuels and Appliances. It has been formally approved by the Z21/83 Technical Committee and the Interprovincial Gas Advisory Council.

This standard was also reviewed by the CSA Subcommittee on Household and Commercial Dishwashers, under the jurisdiction of the CSA Technical Committee on Consumer and Commercial Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the CSA Technical Committee.

Application of Standard

Where reference is made to a specific number of samples to be tested, the specified number is to be considered a minimum quantity.

Note: Although the intended primary application of this standard is stated in its scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

Level of Harmonization

This standard is published as an identical standard for CSA Group and UL.

An identical standard is a standard that is exactly the same in technical content except for national differences resulting from conflicts in codes and governmental regulations. Presentation is word for word except for editorial changes.

Reasons for Differences From IEC

This standard provides requirements for commercial dishwashers for use in accordance with the electrical installation codes of Canada and the United States. This standard does not employ any IEC standard for base requirements.

Interpretations

The interpretation by the standards development organization of an identical or equivalent standard is based on the literal text to determine compliance with the standard in accordance with the procedural rules of the standards development organization. If more than one interpretation of the literal text has been identified, a revision is to be proposed as soon as possible to each of the standards development organizations to more accurately reflect the intent.

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Commercial Dishwashers

1 Scope

1.1 This Standard covers commercial, freestanding, under-counter, and counter-insert dishwashers, utensil-washers, and glass washers using water as the principal cleaning medium, hereafter referred to as dishwashers. These dishwashers utilize steam, gas, or electric heaters for heating the water. Heated water is provided to a dishwasher by means of steam, gas, or electric heating systems integral to the appliance, or by means not integral to the dishwasher that is provided at the installation site.

1.2 This Standard is not intended to be used to evaluate the gas-fired water heating portions of the system that incorporate water containment vessels operating above atmospheric pressure.

For dishwashers that incorporate a gas-fired water heater with a pressurized water containment vessel operating above atmospheric pressure, the water heater portion of the system is covered by the requirements of ANSI Z21.10.3/CSA 4.3.

1.3 This Standard covers:

a) electric dishwashers rated 600 V or less, installed in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1, and the National Electrical Code (NEC), NFPA 70; and

b) the gas-handling, gas-burning, and gas-control features of gas-fired dishwashers having inputs of 420 MJ (400,000 Btu per hour or less, limited to 3.45 kPa (0.5 psig) inlet pressure, installed in accordance with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, the International Fuel Gas Code, ICC IFGC, or the Natural Gas and Propane Installation Code, CSA B149.1 for use with:

- 1) natural gas;
- 2) manufactured gas;
- 3) mixed gas;
- 4) propane gas;
- 5) liquefied petroleum gases; or
- 6) LP gas-air mixtures.

1.4 These requirements cover dishwashers intended for use in commercial establishments, such as kitchens of restaurants and hospitals, where they are not intended to be accessible to the public.

2 General

2.1 Components

2.1.1 Except as indicated in Clauses [2.1.2](#), [2.1.3](#), and [2.1.4](#), a component of a product covered by this standard shall:

- a) comply with the requirements for that component as specified in this Standard;
- b) be used in accordance with its rating(s) established for the intended conditions of use;
- c) be used within its established use limitations or conditions of acceptability;